THE JOURNAL
of the
OKLAHOMA STATE MEDICAL ASSOCIATION

EDITORIALS

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The readers of the *Journal* will regret the announcement of Joe Hamilton's retirement as director of the Oklahoma Commission for Crippled Children. But Joe can never fade away. Fortunately, he will continue to serve as Executive Secretary of the Oklahoma Society for Crippled Children where he has rendered valuable services for 26 years.

Having served as director of the Commission for 16 years, he gives up this position in order to devote full time to the volunteer society. The Crippled child, the people of Oklahoma and the medical profession of the state are indebted to Joe Hamilton for valuable service well performed.

TOO MANY DOCTORS IN LARGE CITIES

In the editorial columns of the *Journal* the shortage of doctors has been questioned repeatedly throughout the years. The recent income survey tends to support this position. Also it clearly indicates that many doctors might profit by locating in small towns or rural communities. The *Journal of the American Medical Association* states that "In the larger sense this study demonstrates again that there was no nation-wide shortage of physicians in 1949, for physicians' incomes had risen just about as fast percentagewise as the average income of the American people. The mean and median net incomes of physicians in 1949 would have been far higher if there had been a nation-wide shortage of physicians. On the other hand, this study provides much evidence of the economic advantages of practicing medicine in the small and medium-sized cities and, indirectly, may suggest to some an over-supply of physicians in metropolitan centers."

As pointed out in previous editorial comments there are many advantages to be had in the small town or in the country. Modern transportation eliminates the danger of being cut off from the major city advantages. The objections often advanced with reference to cultural and educational advantages have never been wholly tenable. Considering the present trend toward so-called progressive education in many city schools causes one to wonder if the best future Americans may not come from the rural communities as in the past.

With proper public relations, rural communities can be induced to help provide adequate facilities for the practice of scientific medicine, thus enabling young physicians to satisfactorily apply the knowledge they have gained through an exacting eduction and to realize their manifest destiny. Under such circumstances the physician will take his place among the leading citizens in his community. His wife if worthy of her position can live in relative comfort and radiate peace and happiness. If she has children she can provide physical advantages and spiritual values not to be had in large cities. Many of the world's greatest benefactors have been country doctors. The following from the *Supplement* to the *British Medical Journal* is in keeping with the spirit of this editorial.

A survey of many practices, single-handed and partnership, in different parts of the country, in city and dormitory and rural areas, in industrial, agricultural, and mining areas, in seaports and health resorts, was undertaken by an official of the Association (and largely completed before the 'appointed day' under the National Health Service Act). It emphasized the fact, already assumed, that nearly everybody in this country has a general practitioner whom he regards as his personal doctor. As a rule it is through the general practitioner that the whole health organization is brought into action. The personal bond between patient and individual doctor is strongest in rural areas and in towns with a stable population, less strong in the dormitory suburbs of London, weakest in the neighborhood of the great teaching hospitals."

In this report it is admitted that the "family doctor" system has partially broken down." The profession and the people should see that this does not happen in the United States.

CLGA

The *Daily Oklahoman* of September 4 carries a story taken from Komsomolskaya

V. 44, no. 11 (Nov.) 1951

Pravda, newspaper of Soviet youth which should cause all medical students and young doctors to think seriously before they vote. With a lingering modicum of self respect and environment instinct, the young physician Olga and her parents, in spite of the annulling influence of government domination and in keeping with enforced disregard for honorable action, employed every possible subterfuge to escape the imperious assignment for service in Siberia. It was claimed that Olga had malaria. This failing, Olga had secondary anemia. But it was argued that both could be treated in Siberia. Then Olga mimicked symptoms of insanity. "This stratagem," said the paper, "also came to nothing, for it was not part of the parents' plan that Olga should stay in the institution as a patient." No doubt Olga is slugging it out in Siberia dreaming of what is left of home under Russian rule.

This is reported here because all people in the U. S. who are directly or indirectly interested in medicine should be made cognizant of the fact this can happen here. The bureaucratic plan for medical care anticipates control with police power. The report contains certain hopeful aspects. It indicates that in Russia there is still a vestige of the homing instinct even though moral, social and political integrity is benumbed. Of greater significance to us is the fact that among the youth of Russia, similar manifestations of dissatisfaction with governdirectives is not uncommon and that they have been held up as "poor examples of Soviet youth." The youth of the United States must never find themselves in such a diabolical situation.

INCURABLE

Oscar Ewing's fever cure is unpredictable. Even the best clinical prognosticators can never tell when it may spike up to a latitude not provided for on the chart. His latest, the so-called free hospitalization for the aged is loaded with enough dynamite to give everybody a headache. In spite of what he says about meeting the cost, even the low bracket taxpayers had better sit up and take notice. In most communities available hospital beds are occupied and with few exceptions their distribution and allocations are discretionary. Make hospitalization free for millions and see what happens to the beds. The people now occupying the beds need them primarily for curable and remedial conditions so they can get back on the job and keep the wheels turning. The nation's economy needs the beds for the people who are curable, who can hope for restoration of earning capacity.

The aged chiefly suffering from chronic and degenerative conditions, often better handled outside the general hospital, with few exceptions would occupy a bed for rest, not for restoration of physical competency. If the beds do not remain available for the curable the cost will be great. If new beds are constructed, the cost will strike deep. Let the people and their communities care for their own aged in the old fashioned, economical, merciful way before the dollar is washed out in Washington. We were happy before the tyranny of government robbed us of our opportunity, our responsibility and our charity in connection with the needy in our own respective communities. We say the government belongs to the people. Perhaps it did before the government usurped so many of the people's liberties.

REMEMBER

DIABETES DETECTION DRIVE

November 11-17

American Diabetes Association requests all physicians to give free urine examinations for sugar during this week.

SCIENTIFIC ARTICLES

HYPERPARATHYROIDISM - OSTEITIS FIBROSA CYSTICA PARATHYROID ADENOMA - WITH REPORT OF A CASE

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The parathyroid glands originate from the third and fourth branchial grooves. They are flattened, oblong nodules of brownish-yellowish color, measuring about 6 x 3 x 2 mm., and weighing around .035 gm. In the great majority of cases two superior and two inferior glands are found. The former are located on either side of the posterior aspect, upper pole of the lateral thyroid lobes; the inferior glands are applied to the lower edge of the lateral lobes, posterolateral. The glands are closely applied to the capsule of the thyroid gland and their blood supply derives from the interior thyroid artery. There may be many more than four parathyroid glands. MacCallum says that the number of parathyroid glands are as a rule in direct proportion to the "patience and persistence of the searching pathologist." Aberrant parathyroid cell nests may be found inside the thyroid gland or in the fatty and areolar tissue in the neck or in the mediastinum. The parenchyma of the glands consists mainly of principal cells some of which are clear ("water clear"), whereas others are dark. Their cytoplasm contains lipid and glycogen. In adult life oxyphile cells appear and increase in number which stain intensely with eosin and are believed to represent a degenerating phase of the principal cells. The function of the parathyroid glands is to regulate calcium and phosphorus metabolism. Calcium and phosphorus form the anorganic matrix of the bony skeleton and teeth, which constitutes their main distribution. Only one per cent of the calcium is found in tissues outside the skeleton, but the calcium ions are vital to function as they regulate the excitability of nerve ganglia and peripheral nerves, the excitability of muscles, the clotting of blood, and the permeability of cell membranes. Eighty to 90 per cent of the calcium is excreted in the feces, and 10 to 20 per cent in the urine. About 40 per cent of the phosphorus is excreted in the feces and the remainder in the urine. The normal blood calcium level equals 8-11 mg. per cent; the normal phosphorous level 3.5 to 5 mg. per cent; of further importance for the utilization of phosphorus is the encyme phosphatase, the normal blood level of which is 1.5 to four Bodanski units for its alkaline variety.

The parathyroid hormone regulates the blood-calcium and blood-phosphorus levels, together with Vitamin D which in its main component is its antagonist. Vitamin D is essential for the absorption of calcium from the intestines which of course is essential for calcification of bones and teeth. The parathyroid hormone on the other hand mobilizes calcium from bones. Its action as suggested by animal experiments and clinical observations is believed to be threefold: *First*, the hormone increases osteoclastic absorption of bone due to a marked increase in the number of osteoclasts. *Second*, the hormone increases the renal excretion of phosphates by interfering with its tubular reabsorption. The consequence of these two actions are a high blood calcium level, since much calcium is mobilized from the destroyed bones, and a low phosphorus level, since increased phosphorus is excreted in the urine. The high blood-calcium level brings with it the danger of metastatic calcification of other organs and the production of renal calculi. *Thirdly*, the hormone inhibits calcification of new bone, presumably because of its antagonistic action to Vitamin D. All these three actions of the parathyroid hormone contribute to destruction of old bone, and incomplete calcification of new formed bone. If on the other hand the action of the parathyroid glands is reduced or destroyed, there is a decrease in normal bone absorption and a decrease in the blood calcium level, which may lead to tetany.

One distinguishes primary and secondary hyperparathyroidism. Primary hyperparathyroidism is caused by functioning adenomas or more rarely carcinomas of the parathyroid glands; or occasionally by simple hyperplasia.

Secondary hyperparathyroidism occurs under two instances. First: If there is impairment of calcium or fat absorption from

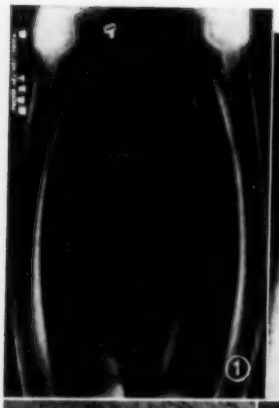

Fig. 1. Roentgenogram of femora at onset of observation, showing marked bending of the shafts, diffuse osteoporosis, and a localized cortical osteolytic lesion in one femur.

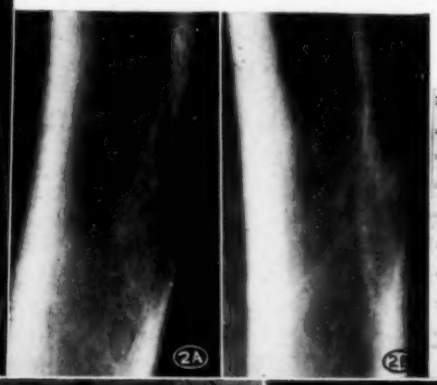

Fig. 2. A) Roentgenogram of osteolytic, pseudocystic lesion in cortex of right femur, before removal of parathyroid adenoma. Note demineralization of cortex, and some of reactive osteosclerosis on the medullary side of the lesion.

B) Roentgenogram of same lesion, 8 months after removal of parathyroid adenoma. Note osteosclerosis within still visible lesion, as well as increased density of medullary cancellous bone and thickening of cortex outside the lesion.

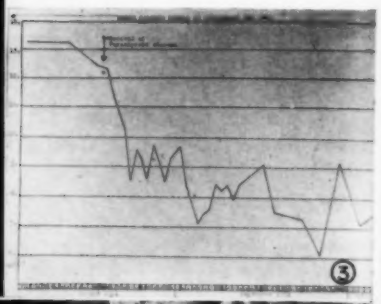

Fig. 3. Curve of blood-serum calcium levels before and after removal of parathyroid adenoma. Note high levels before, and dramatic fall after operation. Note low, pretetanic postoperative calcium levels, suggesting withdrawal of calcium for remineralization of bones.

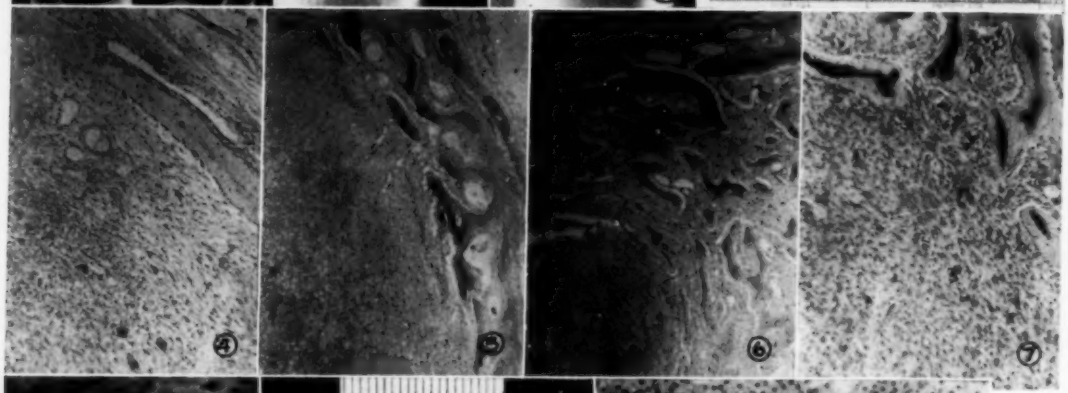

Fig. 4. Photomicrograph of biopsied tibial lesion. Note complete replacement of old cortex by thin bar of new forming bone, surrounded by osteoblasts; and complete replacement of cancellous bone by "brown node," consisting of fibrous tissue with osteoclastic giant cells.

Fig. 5. Photomicrograph of biopsied tibial lesion. Old cortex replaced by new primitive bone, arranged perpendicular and parallel to cortical axis. Note dark staining central zones in bony bars, suggesting primitive calcification of new bone. Cancellous bone replaced by "brown node."

Fig. 6. Photomicrograph of biopsied tibial lesion. Note small "brown node" in left lower corner, surrounded by zone of relatively sclerotic primitive bone.

Fig. 7. Photomicrograph of biopsied tibial lesion. "Brown node" with fibroblasts, giant cells and blood pigment. At the periphery primitive bone with osteoblasts, producing wide seams of osteoid, and primitive central dark staining calcification.

Fig. 8. Photomicrograph of biopsied tibial lesion, high power, showing multinucleated osteoclastic giant cells. Note complete absence of bone.

Fig. 9. Surgically removed parathyroid adenoma.

Fig. 10. Photomicrograph of parathyroid adenoma. Note numerous capillaries surrounded by sheets of uniform tumor cells.

Fig. 11. Photomicrograph of parathyroid adenoma, high power, showing a field containing a mitosis and hyperchromatic, giant, pyknotic nuclei. This in endocrine tumors, is not necessarily suggestive of malignancy.

the intestines such as occurs in Vitamin D deficiency, celiac disease, sprue or lack of bile, all of which produces a low blood calcium level, a reactive hyperplasia of the parathyroid glands, and secondary hyperparathyroidism may occur. The enlargement of the parathyroid glands in rickets is well known and the bone lesions of rickets or osteomalacia are due not only to lack of Vitamin D, but also to increased function of the uninhibited antagonist, the parathyroid gland. Tetany, indicating hypoparathyroidism, characteristically does not occur during the active phase of rickets, but later in the healing phase, when excessive amounts of calcium are withdrawn from the blood to be used for the calcification of osteoid.

The second type of secondary hyperparathyroidism occurs in chronic renal disease in which there is retention of phosphorus in anatomically damaged tubules. This sets up a reactive hyperplasia of the parathyroids which as noted before, tends to interfere with the reabsorption of phosphorus into the tubules, and therefore produces an increased excretion of urinary phosphorus thereby counteracting the effect of tubular damage. The hyperplastic parathyroids then exert their other functions excessively and as a consequence increased osteoclastic activity and incomplete calcification of new bone occurs and the lesions of so-called renal rickets are produced.

In hyperparathyroidism, the normal action of the parathyroid hormone is greatly exaggerated. We therefore find markedly increased osteoclastic activity throughout the skeleton, increased phosphorus excretion through the kidneys, a low phosphorus blood level and a high calcium blood level. There is consequently increased destruction of bone with general osteoporosis and focal often cystic areas of cone destruction: osteitis fibrosa cystica. However, in many cases bone formation keeps pace with bone destruction and no destructive lesions occur. In 24 cases reported by the Mayo Clinic, about one-third showed minimal bone changes, and the remaining third showed no bone changes whatever. These authors believe that many cases of hyperparathyroidism exist in a mild form, and that all cases of nephrolithiasis and nephrocalcinosis should be studied carefully for hyperparathyroidism.

Experimentally, osteitis fibrosa cystica can be produced in animals by the injection of aparathyroid hormone.

In man, the relation between osteitis fibrosa cystica and hyperparathyroidism produced by a functional parathyroid adenoma was first proved by Mandl based on Erdheims fundamental research. Mandl in 1926 was the first to remove a parathyroid adenoma in a case of osteitis fibrosa cystica, with at first dramatic results. Subsequently around 600 cases of hyperparathyroidism have been reported, the majority of which were caused by parathyroid adenomas. These adenomas are usually single, but may be multiple. They are of soft consistence, yellowish-brownish color and variable in size. Histologically, they are usually composed of principal cells; oxyphile cell adenomas have been reported but are believed to be non-functional. Most parathyroid adenomas are benign, but eleven papers deal with carcinomas of the parathyroid gland (see bibliography). It should be noted here that diagnosis of malignancy of parathyroid and other endocrine-adenomas is based on clinical rather than morphological evidence. Neither invasion of capillaries nor of capsule nor anaplasia of individual tumor cells indicates malignancy in endocrine tumors; only local recurrence, distant metastases or very marked anaplasia are suggestive of carcinoma.

Most cases occur in middle or old age, and more frequently in females. The symptoms are slow in onset but have a chronic progressive course. There is usually pain in the legs and back. Stiffness of the joints is often treated as rheumatism. Fatigue is profound. There is muscular weakness and tenderness of the bones and the muscles are flabby and atrophic, with neuromuscular hypoexcitability and muscular hypotonia. There is generalized decalcification of all the bones, often with cyst formation. Spontaneous fractures frequently are the first symptom of the disease. Deformity of the bones is often seen in the legs, chest and spine. All types of acute and chronic kidney degenerations are frequent and kidney stones and calcifications in the kidney often occur, especially in the renal type of the disease. This may be the first indication that a hyperparathyroidism exists. Disturbances of the gastrointestinal tract, such as nausea, vomiting and epigastric pain, are seen and duodenal ulcer occurs in about one-third of the cases. Anorexia is generally severe, achylia, constipation and anemia are often present. The blood calcium may be increased up to 12 to 14 mg per cent or even higher. This is especially noted in the osseous type of hyper-

parathyroidism. The blood phosphorus is generally decreased. We also see a high urine calcium and a high urine phosphorus. The normal urine calcium is 20 to 40 mg per cent per 100 c.c. and the normal urine phosphorus is one to 2.5 mg per cent per 100 c.c. Hyperparathyroidism generally progresses very slowly and lasts one to 10 years before death.

The differential diagnosis must consider the following conditions:

1. Solitary bone cysts: occur in young persons. Blood calcium and —phosphorus normal. No generalized osteoporosis.

2. Rickets (in children) and osteomalacia (in female adults): No localized destructive bone-lesions. Blood calcium normal or low.

3. Osteitis deformans (Paget's disease): No localized destructive lesions. Blood calcium and —phosphorus normal.

4. Multiple myeloma and bone metastases: No general osteoporosis. Blood chemistry normal with exception of increased phosphatase.

5. Albright's syndrome: Normal blood chemistry. Areas of bone replacement alternating with areas of hyperostosis. Sexual precocity, skin pigmentations.

Surgical treatment is the only treatment of value in hyperparathyroidism. All adenoma must be removed or if due to hyperplpasia of the glands, three glands should be removed and the fourth gland left. (Cope) If no enlarged glands or tumors are found search must be extended to the substernal area and anterior mediastinum even though a later operation is required.

Operation: Local, nitrous oxide or intravenuous sodium pentothal are satisfactory anaesthetics. The incision should be a low collar incision as in thyroid operation. Make a careful search of one side at a time. Adenomas are seldom palpable before operation, therefore, no clue is present as to the position or location of the tumor. Surgeons should be experienced in thyroid operations as they are more familiar with the appearance and location of the parathyroid glands. These glands are readily confused with small thyroid nodules, aberrant thymic nodules, lymph nodes and fatty tissue. Any nodule that has a vascular pedicle is a parathyroid gland. Any node or mass or suspicious nodule should be examined immediately by frozen section. If the first gland removed and examined by frozen section does not show hyperplasia of the gland, a tumor must be sought, either in the neck, thyroid gland, or in the mediastinum. About 10 per cent of all parathyroid tumors have been found in the anterior or posterior mediastinum. The calcium in the blood begins to decrease immediately after the operation and if no decrease occurs and the symptoms do not clear up or return after an interval, another adenoma probably exists and a second operation should be done.

Post-operative complications: 1. Recurrent laryngeal nerve injury. 2. Postoperative tetany due to removal of or damage to all four parathyroid glands. Daily calcium determinations and watch for clinical symptoms of tetany must be made. Calcium levels below seven mg. per cent are within the danger zone. Treatment with AT 10, calcium or parathormone must be instituted at once.

After removal of a functioning parathyroid tumor, pain is the first symptom to disappear as early as during the first week. Recalcification of the skeleton occurs slowly, spontaneous fractures heal, muscle tonus returns, but deformities remain. The hypercalcemia disappears rapidly. Osteoporosis may persist for a long time.

In reviewing the literature of hyperparathyroidism, the following points are of extreme interest. First, there exists an acute form of hyperparathyroidism often beginning with pain in the epigastrium, with nausea, persistent vomiting, weakness and lethargy. Waife reported five cases of this type and they are rapidly fatal. Second, hypertension with or without renal insufficiency may develop following the operation, even though no renal damage was found and the patient was clinically cured of the disease. Rienhoff reported in a follow-up study of his 25 operative cases, that nine deaths occurred in three to 11 years after operation, and all these were due to hypertension with or without renal insufficiency. In five of these patients, no evidence of any renal damage was found prior to operation, therefore, even though the symptoms disappear and the blood calcium and phosphorus return to normal the prognosis as to length of life has to be guarded. Renal stone, hypertension, renal insufficiency and uremia are prone to occur even in the apparently cured patient. Third, more cases of a coexisting, active or latent duodenal ulcer and hyperparathyroidism are being found.

Rogers and Keating found active or latent duodenal ulcers in three of their four cases of parathyroid hyperplasia at the Mayo Clinic. This association calls for further study as its significance is not known at this time.

CASE HISTORY

M. D., a 64-year-old woman, was brought to the office with the chief complaints of a gradual weight loss of 46 pounds during a period of 10 years, and muscular weakness. Present weight was 64 pounds. For the past two to three years, she had nocturia and polyuria and for the last six months pain and tenderness of her legs, with difficulty in walking and extreme fatigue. There has been a lump in the right tibia for four months which was tender, painful not red and gradually had increased in size. She also complained of anorexia, extreme constipation, nausea, bloating, nervousness and insomnia.

Physical examination revealed a very emaciated but alert woman who walked with diffculty. There was a slight enlargement of the lower pole of the left thyroid lobe. There was some tenderness over the ribs. Chest, cardiac findings negative. Blood pressure 160/90. Abdomen and pelvis negative. The bones of the legs were tender, and there was a small nodular egg-sized swelling in the upper third, anterior surface of the right tibia; it was not red, not fluctuant and not movable. A similar smaller mass was found in the middle third of the right tibia.

Laboratory Findings: Hemoglobin 10 gm. Rbc 3,880,000. WBC 10,000 with 55 per cent neutroph. segment., five per cent eosinoph., 40 per cent lymphocytes. Kline negative. Urine: Spec. gravity 1012; ph 6.5; album. 1 plus. Sugar neg.; Sedim. 20 to 30 pus cells hpf, gram neg. bacilli, identified as E. coli. Urinary calcium not increased. Total serum protein 5.17 gm. per cent. Serum albumin 2.69 gm. per cent. Serum globulin 2.48 gm. per cent. N.P.N. 34.8 gm. per cent. *Serum calcium* 13.2 *and* 12.4 *mg. per cent. Serum phosphorus* 2.9 *and* 2.8 *mg. per cent.* Alkaline phosphatase 2.8 and 2.8 Bodanski units. X-rays of the pelvis, legs, chest and skull showed marked, generalized osteoporosis of all bones with cysts of the right tibia and right femur (Fig. 1, 2A). Also old fractures of the seventh and eighth ribs, right side and marked bending of both femora (Fig. 1).

On August 3, 1950, biopsy of the cyst of the right tibia was done and a diagnosis of Osteitis Fibrosa Cystica and probable parathyroid adenoma was made. (See pathological report later on.). From August 4, 1950, to August 18, 1950, daily transfusions were given, also intravenous glucose, amino acids, vitamins, etc., and forced feeding by mouth. On August 17, 1950, the patient was much stronger, the hemoglobin was 11.5 grams (77 per cent) and the RBC was 3,680,000. On August 18, 1950, exploration of the neck for parathyroid tumor was done. The left side was explored first. The left lower lobe of the thyroid was enlarged but no tumor was found. Several pieces of tissue were taken for fresh tissue biopsy. No enlarged parathyroid glands were found on the left side. The right side was thoroughly explored and tissue taken for biopsy, which was negative. A small tumor was found just below and behind the sternum and tissue for biopsy taken which was positive for tumor of parathyroid. A yellow-brown, firm tumor about three-fourths in. by one and one-half in. was removed by blunt dissection (See pathological report later on). The prethyroid muscles were sutured, tissue drain inserted and skin closed. Patient was returned to her room in fair condition. She was given transfusions of 1000 c.c. whole blood daily and 1000 c.c. five per cent amino acids once or twice a day. Forced feeding by mouth, penicillin, vitamin B complex, calcium and 20 units of parathyroid extract were given every day. She had no signs of tetany but was extremely nervous at times. The only complication was an attack of ventricular fibrillation on August 29, 1950. She had a rapid gain in strength and weight and has had no complaint of pain in her legs or back since the operation. The blood calcium rapidly fell to 8.6 milligrams per cent on the third day and has varied from 7.5 to 9.5 milligrams per cent since the operation (Fig. 3).

She walked out of the hospital on October 10, 1950, much stronger and weighing 80 pounds, a gain of 16 pounds.

X-rays taken eight months following removal of the parathyroid adenoma reveal an increase of recalcification of the long bones. The texture of the bones however never quite returns to normal because the organic matrix has been considerably altered during the period of disease. The cyst-like areas

of diminished density show evidence of being filled in with dense bone (Fig. 2B). There is slight increase in the thickness of the cortex of the long bones.

Since the operation she has continued to improve, weighs 95 pounds, feels good and is in very good health at this time.

Pathological Reports follow:

PATHOLOGIC REPORT OF BIOPSY FROM RIGHT TIBIA:

Macroscopic: Submitted many small and a larger particle, 3 x 1 x 0.5 cm., of bony tissue.

Microscopic: The material presents as peripheral portions of a long bone. The periosteum is slightly thickened and often contains extensive deposits of hemosiderin. No evidence of periosteal inflammation is found. The old cortex is only rarely preserved. It is being replaced by new primitive bone of periosteal origin which at first is arranged perpendicular to the old cortical axis, but later becomes arranged parallel to it in an attempt to produce a new cortex (Fig. 4, 5). In many areas cortex as well as underlying cancellous bone are completely replaced by nodules composed of fibroblasts, capillaries and numerous multinucleated giant cells (Fig. 4-8). These nodules are surrounded by a zone of fibrosis within which there is much formation of new primitive bone and extensive deposits of blood pigment: "brown nodes" (Fig. 6).

All new bone, cortical or cancellous, is composed of bars surrounded by osteoblasts which produce a peripheral seam of osteoid. In the center, deposition of primitive osseous substance, staining purple with hematoxylin, is taking place, and within it, the osteoblasts have been converted into star-shaped young culae are on one side lined with osteoclasts osteocytes (Fig. 7). Many of these Trabeculae are on one side lined with osteoclasts destroying bone. These trabeculae are embedded in a fibrous matrix completely replacing the bone-marrow, and containing extensive deposits of blood pigment.

Comment: The focal osteoclastic destruction of old cortical and cancellous bone and its replacement by "brown nodes" composed of osteoclastic multi-nucleated giant cells, and by new primitive, poorly calcified bone, embedded in a fibrotic matrix, is characteristic for osteitis fibrosa cystica (Von Recklinghousen's disease). The brown color of the nodes is produced by deposition of blood pigment at their periphery. The absence of extensive production of primitive bone as found in the mosaic structures of Paget's disease (osteitis deformans), speaks against that disease. The presence of large nodular areas of complete bone destruction speaks against osteomalacia, in which a more gradual replacement of old bone by primitive often osteoid bone is found. This lesion is a characteristic manifestation of hyperarathyroidism and in all likelihood is produced by a parathyroid adenoma which should be searched for and removed.

Diagnosis: Osteitis fibrosa cystica (Von Recklinghousen's disease). Suspicion of parathyroid adenoma.

PATHOLOGICAL REPORT OF PARATHYROID TUMOR

Macroscopic: Submitted a well encapsulated oval-shaped tumor weighing seven grams and measuring 4 x 2½ x 1 cm. The tumor is distinctly lobulated and of very soft consistence. On cross-section the tumor stroma is homogenous and salmon colored. In the center, however, an oval shaped sharply outlined area is found, which is brownish-colored and has a surrounding yellowish zone. At the periphery the tumor stroma also has a slight yellowish tinge (Fig. 9).

Microscopic: The tumor is composed of fairly uniform large polyhedral cells arranged in large solid sheets and nests, and occasionally lining acinar or tubular structures (Fig. 10). The nuclei of the tumor cells are vesicular with finely granular chromatin and well visible nucleolus. Occasionally, large hyperchromatic nuclei are found and rarely mitoses are seen. Some nuclei are enlarged, hyperchromatic and pyknotic (Fig. 11). The cytoplasm shows considerable variations in structure. In most tumor cells it is abundant, slightly acidophilic, finely granular and containing small droplets of lipid. The granules present as glycogen in special stains which is arranged at the cell periphery. Clear, "wasserhelle" cells are found rarely. There are scattered nests of larger distinctly eosinophilic cells which may or may not be granular. All gradations are found from a non-staining vacuolated cytoplasm to markedly eosinophilic cytoplasm. The majority of cells shows moderate eosinophilia and fine granularity. The cell boundaries are very distinct. A large number of capillary and small blood vessels are found between the tumor cell-sheets, the capillaries being directly surrounded by tumor cells (Fig. 10). The tumor shows exceedingly little supporting stroma and that only around the larger blood vessels, in the form of thin strands of connec-

tive tissue. In the center extensive apparently degenerative changes are found in the form of large spaces filled with amorphous precipitated liquid material. Within these spaces small nests and groups of well staining tumor cells are seen, and at their periphery one sees disintegration of tumor cells, a process which eventually leads to the formation of these spaces. Within and around these spaces one sees numerous phagocytes filled with hemosiderin. The tumor is well defined and surrounded by a thin capsule.

Diagnosis: Chief-cell adenoma of parathyroid gland.

SUMMARY

The anatomy and physiology of the parathyroid glands, and the nature, causes, clinical picture, differential diagnosis and treatment of hyperparathyroidism is discussed. The case of an elderly female patient is presented in whom a clinical, roentgenological and biopsy diagnosis of osteitis fibrosa cystica was made, and an adenoma of a parathyroid gland found and removed, following which there was a dramatic recovery with prompt return of the previously high blood calcium levels to normal, ossification of destructive bone lesions, and regain of the previously lost 30 pounds of body weight within a few months.

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PLAN TO ATTEND THE

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DALLAS, TEXAS NOVEMBER 5-8, 1951

STUDIES OF TREATMENT PROBLEMS OF ADENOCARCINOMA OF THE ENDOMETRIUM*

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There is still considerable confusion as to the effectiveness of various forms of treatment of endometrial adenocarcinoma. This is surprising since it is a tumor of reasonably frequent occurrence and is amenable to accurate study by histologic methods applied to material obtained by curettage and surgical removal of the uterus. At present the confusion centers about the following problems:

1. What is the effectiveness of x-ray and of radium?
2. What is the effectiveness of the standard surgical procedures and to what extent can this type of surgery be applied with reasonable safety?
3. How should the vagina be handled as a frequent site of metastasis?
4. What is the effectiveness and applicability of more radical surgical attack?

It is with the first two of these questions that this report is primarily concerned.

There is a large literature dealing with the results of therapy of adenocarcinoma of the endometrium and it will serve no useful purpose to attempt to summarize it here. To much of it, serious objections may be raised. Two recent papers have attempted to draw conclusions from clinical material of which only two-thirds was followed and one-third lost. Conclusions based on such studies are not acceptable for obvious reasons. Even with the advantage of this selection, five year cure rates of less than 50 per cent were used in support of the recommendation that x-ray and intrauterine radium are an essential part of standard therapy. This would seem to be questionable proof.

Those who hold opposing views have on occasion attempted to support their position by equally unacceptable statistical evidence. Those patients with adenocarcinoma of the endometrium who are treated surgically represent in variable degree, a group selected for physical fitness and apparent localization of the tumor. The group which is treated by irradiation is likely to be abnormally loaded with poor risk patients. How great this selection factor can be is evidenced by the fact that in the University of Minnesota material, the surgical rate from 1928-38 was one in three, whereas in recent years, it has been raised to the point where four of five patients are being surgically treated.

There is one other factor which may lead to some confusion in comparing the results of malignant tumors treated by irradiation with those which are surgically treated. One is constantly reminded by clinical experience that the patient who is ineffectively treated for malignant disease by surgical means seems to have her life expectancy shortened as a result. This is strongly suggested in carcinoma of the vulva. Our own experience with this tumor shows that only a rare patient dies of tumor after surgical therapy later than 20 months after such surgery. This is not the expected natural history of untreated vulva cancer. As for adenocarcinoma of the endometrium, in the 128 reportable patients seen in the 1939-45 period, only four have died of tumor after the five-year interval following treatment. One of these may have died of metastases of a known carcinoma of the breast. During this time approximately 70 per cent were surgically treated. In contradistinction, 22 died within a year of treatment. Although accurate studies of the life expectancy of untreated adenocarcinoma of the endometrium are not available, there is a worrisome suggestion that the end is hastened in those patients who are incompletely treated.

The reverse is true of those patients with adenocarcinoma of the endometrium who are treated with adequately distributed intrauterine radium in adequate dosage particularly when the tumor is localized to the endometrial cavity. They may often enough be carried for long periods of time before the tumor breaks loose.

Thus it is quite possible that some other set of conditions than the five-year survival feature should ultimately be used for comparison of surgical and radiologically treated material. At present the five-year survival

NOTE: These studies were made possible by funds which were supplied by the Minnesota Division of the American Cancer Society.

*Presented before the Section on Surgery at the Annual Meeting of the Oklahoma State Medical Association, May 21, 1951.

TABLE 1
ADENOCARCINOMA OF ENDOMETRIUM

Year	Total No. Seen	Reportable No.	Not treated	Surgery	Radium	X-ray	Survival in Years 1	2	3	4	5	6	7	8	9	10	11	Died of Tumor	Died of other disease
1939	23	17	1	10	13	15	9	9	8	8	7	6	6	6	6	4	4	6	7
1940	23	19	1	15	14	10	16	13	13	13	10	10	10	10	10	10		7	2
1941	20	18	3	12	13	5	13	13	13	13	13	11	9	9	9			4	5
1942	23	20	2	13	14	4	14	13	11	10	8	8	7	7				8	5
1943	23	21	1	19	16	2	18	18	15	15	14	13	12					6	3
1944	19	15	1	11	11	4	12	10	10	10	10	9						5	1
1945	19	18	1	14	14	2	14	14	13	12	12							3	3
1946	25	23	4	15	11	1	15	13	12	11								9	3
1947	11	10	0	9	2	1	9	7	7									2	1
1948	22	18	0	16	2	0	16	15										2	1
1949	16	13	0	11	3	4	11											2	0
1950	25	21	3	16	3	2													
TOTALS	249	213	17	161	116	50	147	125	102	92	74	57	44	32	25	14	4	54	31
1939-45	150	128	10	94	95	42	96	90	83	81	74							39	26
	Absolute			73%	74%	33%					57.8%								
	Relative			80%	81%	36%					62.7%								

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test is widely accepted and will be used in the absence of something better.

How can one proceed to obtain data to answer these first two questions? It would seem safest to take a reasonably continuous type of clinical material and vary the frequency of use of the therapeutic tools to be studied at sufficiently long intervals to allow the accumulation of a satisfactorily large number of patients. This should be carried out in such a way that it does not prejudice the welfare of the patients. This has been done. A sufficient time has not elapsed to allow a five-year survival expression for the withdrawal of preoperative radium and a calculation (Table 2) is substituted for what it may be worth. Post-operative irridation and prophylactic radium therapy to the vagina have not been tested.

The material includes all reportable adenocarcinomas of the endometrium seen by the Department of Obstetrics and Gynecology of the University of Minnesota from 1928 through 1950. Patients who have been treated elsewhere and usually referred here for attempts at handling recurrences are not included. Patients who for one reason or another received no treatment here are included. Every patient has been followed to death or the end of 1950. The material from 1928 to 1938 has been previously reported by McLennan[1] and is not given again in

TABLE 2
ADENOCARCINOMA OF ENDOMETRIUM — REPORTABE CASES BREAKDOWN BY TREATMENT

Year	Reportable Cases No.	Treatment: Surgery No.	Surgery %	Radium No.	Radium %	X-ray No.	X-ray %	Absolute "5 year cures" No.	%	
1928-38	80	28	35%					34	42.5%	All but 4 pts. treated
1939-40	36	25	69%	27	75%	25	69%	17	47%	
1941-46	115	84	73%	79	69%	18	16%	57	62%	1941-1945—cure rate based on 92 patients
1947-50	64	52	81%	10	16%	7	11%			
1947-48	"Calculated" from 2 year survival rate								69%	

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detail. The material seen from 1939-50 is shown in Table 1.

A consideration of the theoretical features of the applicability of irradiation to the treatment of adenocarcinoma of the endometrium would strongly suggest that it has only a limited field. Three methods of approach are readily available to observe the relative radiosensitivity of this tumor. The frequent vaginal metastases can be treated with known dosages and it has become clear that effective dosage here requires between seven and 10 thousand gamma roentgens for obliteration of the tumor. The uterus may be removed after exposure to a known dose. This has been done with the material reported here. The results have been presented by Stowe.[2] In 50 per cent of the uteri removed six weeks or more after exposure to full x-ray (3000 tissue roentgens diffusely to mid-abdomen at depth over 28 days) followed by adequately distributed intrauterine radium (4500-6500 milligram hours over 100 hours) there was still tumor present which showed all the characteristics of actively growing tumor. There was no evidence in any of the specimens of a lethal effect on tumor which had invaded the uterine wall. Only surface tumor was affected and that incompletely.

Finally, one can observe the effect of x-ray irradiation on proven spread of tumor beyond the uterus. Cures are simply not produced by such irradiation.

The irradiation problem seems clear. The tumor must have very large doses of irradiation energy to produce destruction. These doses are larger than those which will be tolerated by gut and bladder. The maximum x-ray doses which can safely be delivered are, when reduced to an approximate equivalent of single dose therapy, about one-quarter of the dosage required. Because of the inverse square law which governs the distribution of irradiation energy at distance, short focal distance application as it is used in the intra-uterine application of radium may supply satisfactory dosages very close to the radium source of energy. This rapidly decreases with even very short distances to quickly fall below the required dosages. A compound isodose curve for 5000 mgm. hrs. from five portals within the uterus is shown. The line marked 10,000 gamma roentgens may be taken as representing the outline of the cavity of the uterus. One-half centimeter beyond that laterally, at the line marked 5000 gamma roentgens, the dosage has already fallen below that required. This chart may be used for larger doses by simple correction in proportion to the changed dosage provided that the proportionate distribution of radium in the five sources remains the same.

There would seem then to be theoretical and some practical basis for the conclusion that adenocarcinoma of the endometrium which cannot be surgically removed is extremely unlikely to be cured by irradiation unless it is limited to the surface of the cavity of the uterus or to the vagina. X-ray offers nothing of significance by itself but trouble and expense except a small additional dose to the uterine cavity and immediately adjacent myometrial area. This additional dosage can be obtained with less risk and much less in the way of side effects by temperate increases in the intrauterine radium dosage.

All of this is not to say that irradiation is entirely useless in the treatment of adenocarcinoma of the endometrium. Adequate intrauterine radium irradiation may be used for the hopeless surgical risk patient, the so-called technically inoperable state and for palliation. It is the method of choice, again in adequate dosage, for vaginal metastases. It is being used in this department for two other loosely related purposes. The patient who appears because of her general physical condition to be a too serious surgical risk is treated by intrauterine radium. The interval is used to try to improve her general physical status. Three to six months later, curettage is done. If tumor be present, the department is now prepared to take more serious surgical risks since the alternative is a hopeless one. Many of these are surgically treated. Secondly, intrauterine radium is used to hold a tumor for a time to allow treatment of a specific disease process such as acute diseases, tumors elsewhere, cardiac decompensation, coronary disease in an active form, uncontrolled diabetes, excessive obesity and such things. When these are improved or controlled, the patient is then subjected to surgical attack. The department refers to these as "secondarily operable," adding this to the standard classification of operable, inoperable and technically inoperable.

These conclusions, which it should in all honesty be pointed out, were pretty well established before the study program was

undertaken, were tested and the results are shown in Table 2.

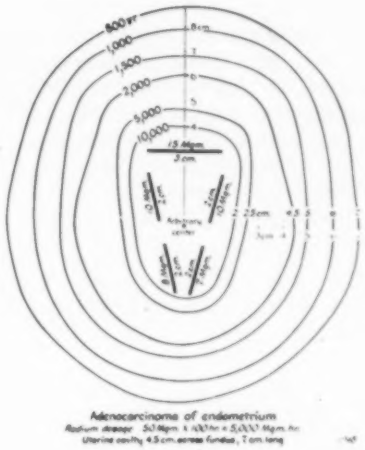
The older material prior to the study was surgically treated to the extent of 35 per cent. All but four of the 80 patients were treated by some means. The remaining 65 per cent were treated by means of irradiation of some sort. This usually involved either radium alone or radium and x-ray. The dosages of both radium and x-ray which were used were less than those now employed by about one-third to two-fifths. A 42.5 per cent five-year cure rate was produced.

In 1939 and 1940, the surgical rate was doubled and approximately three-quarters of the patients had full x-ray and radium in larger doses as described earlier in this paper. An attempt was made to treat all of them by this method with surgical removal of the uterus about six weeks after completion of the irradiation. This was simply not clinically feasible. A 47 per cent five-year cure rate in the 36 patients was produced. This should be higher with the doubled surgical rate. The most likely explanation for the absence of an increased cure rate lies in the probable error of a small group.

In 1941-46, x-ray was given to only 16 per cent. Of the 18 patients who were given x-ray, 15 were also treated surgically. Only three of them are alive and well and these were all surgically treated. Three died of other diseases and 12 died of tumor. There is not much evidence of a beneficial effect of x-ray here in an admittedly poor group.

Of the 115 patients treated in 1941-46, surgery was applied to 73 per cent, intrauterine radium to 69 per cent and x-ray to only 16 per cent. Of these, 92 were treated during 1941-45 and so have passed five years or more since treatment. Of these, 62 per cent were alive and free of tumor at the end of five years.

Since this time, the standard therapy has been surgery and the rate has been increased to 81 per cent. Both radium and x-ray have been reduced to small proportions with special indications. These are not useful as yet for the drawing of conclusions since insufficient time has passed since treatment. For what it may be worth and as an indicator, however vague, of the justification for continuing with this standard surgical treatment alone, a "calculation" has been made



on those of this group treated more than two years ago. Of those patients treated from 1939-46, 68 per cent were alive and well at the end of two years and 58 per cent at the end of five years. Applying this 10 percentage point drop to the 1947-48 material, which shows 79 per cent alive and well at the end of two years, a 69 per cent five-year cure rate is calculated. About all one can say of this is that removal of most of the x-ray and radium treatment shows no evidence of interfering with the increased cure rate achieved by increasing the surgical rate.

What is, of course, of much more importance lies in getting these patients early. Using the material of 1939-45, all of which has passed five years since treatment, and removing from the group those who died of other diseases and those who had clinically or surgically demonstrable metastases at the original admission, 85 per cent are alive and well at the end of five years. The conclusion would seem justified that adenocarcinoma of the endometrium which is caught early and treated actively by surgical means whenever possible, is a disease with a relatively good prognosis.

The usual surgical procedure was simple panhysterectomy and bilateral salpingo-oophorectomy. If lymphatic metastases were demonstrable, gland stripping was added. This was not carried out routinely. Whether or not such routine extension of the surgical attack is justifiable or indeed possible is

open to question. The considered opinion of the department is that it is not.

Prophylactic radium therapy to the vagina has also not been used. If adequate dosages are applied to the whole circumference of the vagina, that organ is closed. Inadequate dosage is useless. It has been the department's preference to watch for metastasis at short intervals, recognize it at an early stage when it occurs and treat such metastasis with interstitial irradiation so that the vagina can be kept open for direct observation and further therapy as required. Further proof than is presently available in support of the correctness of this attitude, is desirable.

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THE NEWER ANTIBIOTICS*

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The newer antibiotics are all the antibiotics, each of which becomes newer every day. There are five antibiotics which possess quite well proven values therapeutically. These are penicillin, aureomycin, streptomycin, chloramphenicol and terramycin. Many others are being developed and studied. The relative merits therapeutically of these antibiotics in infectious processes vary widely. The absolute merits are only partially delineated.

It is the intent of this paper to present the present status of these therapeutic agents relative to:

1. Their specificity;
2. Combined antibiotic therapy—synergistic, additive or antagonistic;
3. Methods of administration;
4. Prophylactic therapy;
5. Deleterious effects of antibiotics.

THEIR SPECIFICITY

Generalizations in the discussion of these points will of necessity obtain.

Of the antibiotics, penicillin continues to be the one of choice and one most used in the treatment of all gram-positive infections due to pneumonococci, hemolytic streptococci, non-hemolytic streptococci in subacute bacterial endocarditis, gonococci and is still the treatment of choice in spirochetal infections (syphilis and relapsing fever). Penicillin is bactericidal, acting mainly if not wholly on the rapidly multiplying organisms. Due to this specific property, therapy may be discontinued earlier than with agents which are only bacteriostatic.

Streptomycin is the most nearly specific for and has been the most efficacious in the treatment of tuberculosis. It finds its greatest specificity in meningeal and miliary tuberculosis although useful in any form. Used alone in rather large doses over a long period of time, or in smaller doses in combination with para-amino salicylic acid, it has become the chief agent for tuberculosis. The antibacterial spectrum of streptomycin covers in addition to tuberculosis, some proteus infections, those due to enterococcus, tularemia, Friedlander's bacillus and influenza bacillus. It is used extensively in combinations with sulfonamides in mixed wound infections and with aureomycin in brucellosis. Streptomycin is quite specific against the influenza bacillus, especially in meningitis due to this organism. It is the most effective antibiotic used in urinary infections which are usually mixed infections of colon bacillus, bacillus proteus, bacillus pyocyaneus, et al. By far the best results have been obtained in the treatment of tularemia with streptomycin. Streptomycin is bacteriostatic in low but bactericidal in high dilutions. Fifty to 70 per cent is excreted in the urine and only small traces in the feces. Spinal fluid levels are high in patients with inflamed meninges.

Chloramphenicol (Chloromycetin, Parke Davis) is currently the most effective antiboitic in the treatment of typhoid fever. The period of doubt as to its effectiveness in typhoid fever is past. It has no equal. While chloramphenicol has a positive action against both gram-positive and gram-negative organisms, it has a stronger action against the gram-negative group. It is active against tuleremia, infectious mononucleosis, Rocky Mountain spotted fever, pertussis at any stage of the disease, mumps, et al.

While the chloramphenicol antibacterial spectrum, like other antibiotic spectra is

*Presented before the General Sessions at the Annual Meeting of the Oklahoma State Medical Association, May 23, 1951.

broadening, it is in many respects like aureomycin and is increasingly used in urinary tract infections, especially the proteus group and less used in gram-positive cocci.

Aureomycin has been found to have a broad antibacterial spectrum, being specifically effective against practically all of the gram-positive and gram-negative organisms. It is active positively against bacilli, especially the gram-negative rods. It is becoming the drug of choice in the treatment of pneumonia since it is effective against pneumonoccocci and also the gram-negative rods which so often are secondary invaders and which produce penicillinase, thereby rendering penicillin less active or even inert against the primary etiologic organism. It is effective against the meningococcus, brucellosis, gonococcus, pertussis, tularemia, all the rickettsial diseases and infectious mononucleosis. It modifies favorably quite appreciably herpes zoster, psittacosis, amebiasis, granuloma inguinale, lymphogranuloma venerium and many other less common diseases. Like chloramphenicol, it has a positive action against both gram-negative and gram-positive organisms but unlike chloramphenicol, it is more effective against gram-positive than against the gram-negative group. It is efficacious against penicillin resistant staphlococci, which are occurring with increasing frequency. Failures with bacteriostatic antibiotics are commonly due to the discontinuance of the antibiotic too soon.

Terramycin, the newest commonly used antibiotic, like chloramphenicol, has antibacterial action which seems to parallel that of aureomycin quite uniformly. Keiffer states that, quote, "In the treatment of lobar pneumonia, penicillin, aureomycin and terramycin have been equally effective and there has been little difference in the results when comparable cases have been studied."

COMBINATION THERAPY

The use of more than one antibiotic, one antibiotic and a sulfonamide, or another therapeutic agent is common practice in the treatment of infectious processes. This practice is based on the premise that the result of combined usage of these agents will be either synergistic, additive or both. It would seem logical that if two therapeutic agents acted positively against one infection that to give both, the antibacterial accomplishment would be greater and probably more rapid. Hunter has pointed out that this is not always true. His point is based on the idea or probable fact that penicillin kills only organisms that are actively multiplying; that aureomycin, chloramphenicol and others are only bacteriostatic. Under such conditions penicillin would cease to kill the static organisms. Hence, in conditions where the death of the organisms is necessary for recovery, combined therapy would be contraindicated. While such a situation might obtain, it probably would be very occasional to rare.

Combined therapy does have specific indications—even imperatives. Some of these are:

1. Mixed infections where one organism may be sensitive to one agent and another organism to another agent. An example of this is the use of penicillin and streptomycin in peritonitis from a ruptured viscus. In this condition streptomycin is effective against gram-negative rods which produce penicillinase, which in turn inhibits penicillin activity on the gram-positive cocci for which it is given. More recent studies have to some extent obviated this combination in that aureomycin, due to its specificity for both gram-positive cocci and gram-negative rods, will accomplish as much as or perhaps more than the combined use of penicillin and streptomycin.

p. For the prevention of secondary invaders, combined therapy may be imperative. Most physicians have seen quite dramatic response to one antibiotic for a few days. Then the improving clinical picture changes very abruptly to an opposite and downward course. An increase in the dose of the antibiotic does not alter the course. With combined antibiotic therapy or even a change of agents, the clinical picture reverses again just as dramatically. No other conclusion can be drawn than that a secondary invader has made its appearance and is not sensitive to the first antibiotic.

3. Other indications for combined therapy are:
   1. Instances in which a smaller dose of an antibiotic over a long period of time is safer (gives fewer toxic manifestations) than large doses. If a second agent makes a smaller dose possible, again it may be imperative. An example of this is the use of

streptomycin and para-amino salicylic acid in the treatment of tuberculosis.

2. It has been shown that dihydrostreptomycin and aureomycin when used in the treatment of brucellosis give much better response than either antibiotic alone.
3. Penicillin and sulfadiazine are more effective in bacterial meningitis than either alone.
4. Penicillin and sulfadiazine should always be given in Waterhaus Friderichsen's disease.
5. In all infections of known etiology in which two agents are known to be specific, combined therapy probably should be routine.

It is seen that there are definite indications for combined therapy. However, one should not draw the conclusion that even a goodly percentage of infectious processes calls for combined therapy. On the contrary; in most infections, it is better to select the antibiotic with a broad antibacterial spectrum and use the single agent. It would be quite simple if facilities were available for determining the etiologic organism or organisms and to test the sensitivity of the offender or offenders to the various antibiotics to prescribe one or more specific antibiotics. Until such facilities are available, the physician must judiciously evaluate his problem and likewise select from the so recently God given medical armamentarium, the drug or drugs that his judgment dictates, ever keeping watch for failures and/or complications.

METHODS OF ADMINISTRATION

Like all other medicaments, the antibiotics vary individually in their administration qualities. Some may be given parenterally—(intravenously, intramuscularly or intrathecally) and some orally. Some are effective one way, some another and others may be given both orally and parenterally.

Penicillin is given intramuscularly, intravenously and orally; usually perenterally for severe systemic infections. Only a few months ago it was thought that most of the penicillin given by mouth was inactivated by the hydrochloric acid of the stomach. This was to a certain extent true but with the improvement in the present day penicillin, satisfactory plasma and therapeutic levels can be had by giving penicillin orally in three to five times the intramuscular doses. These levels can be had and maintained quite well by oral penicillin.

It is interesting to note that penicillin is the only antibiotic, the dosage of which is measured in units and that when 300,000 units are given, one is giving only .2 gram or 200 mg.

The oral dose of penicillin for the common infections is 100,000 units to 400,000 units t.i.d. With this dosage orally one may expect equally as good therapeutic results as that obtained by the intramuscular administration of 300,000 units daily. The plasma and/or therapeutic levels are as easily maintained with this regime.

Streptomycin on the other hand is given only by intramuscular, subcutaneous or intravenous methods. Due to its histamine like action, intravenous administration is not practical. It is absorbed minimally from the intestinal tract and is given orally only for its direct action on the intestinal bacteria.

Aureomycin and terramycin are given both orally and intravenously with equally good results.

Chloramphenicol is given only orally.

PROPHYLACTIC ANTIBIOTIC THERAPY

Prophylactic therapy is most valuable in certain conditions. Probably the conditions most indicating prophylactic therapy are:

1. In patients with rheumatic or congenital heart disease, during epidemics of respiratory infections and with other infections which may be localized and appear harmless. It is imperative that the above type patients be given antibiotic therapy before such procedures as tooth extractions. Either aureomycin or penicillin is effective against bacteriemia. Aureomycin should be given in 1½ to 2 grams for three days before tooth extration and for one or two days following.
2. 250,000 units of penicillin orally will prevent gonorrhea if this is taken from six to twelve hours after exposure.
3. All surgical procedures where infection is likely should have prophylactic therapy especially in chest, abdominal, orthopedic and urologic surgery.

DELETERIOUS EFFECTS

It is not infrequent that one sees a Herxheimer reaction in syphilitic patients treated with penicillin. This has also been reported in brucellosis when treated with an effective antibiotic. A near fatal Herxheimer reaction occurred in a 14 year old male typhoid patient of the author's. Eight cases of typhoid successfully treated with chloram-

phenicol had been reported at the time (1949). The recommended dose was 50 mg. per kilo of body weight and 250 mg. every three hours until the temperature was normal. Accordingly, four grams were given—through a stomach tube. Ot this time, the ninth day of illness, the blood culture and Widal were strongly positive and rectal temperature was 101 to 104, scattered rose spots were present on the abdomen and chest and the mental state varied from fairly clear to semi-delirium. Within six hours after the initial dose of chloramphenicol, the patient chilled, temperature rose to 106, a state of deep coma and vascular collapse developed requiring oxygen and stimulants to maintain life. This clinical picture obtained for 72 hours. The chloramphenicol was continued according to directions. On the third day, in a matter of two hours, the temperature dropped from 106 to 100. It ranged from 99 to 101 for seven days then became normal, during which time the clinical picture was quite gratifying with one exception. This exception was the persistent deep coma for five days before any sign of response could be obtained from stimulae. Gradual improvement followed and at the end of 10 days, the patient was cooperating quite well and recognized his family. His recovery was complete and uneventful. The writer had violated the dictum, "Be not the first by whom the new is tried nor the last to lay the old aside." Even though he violated the dictum, never before nor since have dividends been so great for the time spent in getting the green light from the family for beginning and continuing the new and not too well proven treatment as outlined by and obtained directly from the producers of chloramphenicol.

It is probable that such reactions may be prevented by initiating treatment with small doses of antibiotics.

Hypersensitivity reactions may occur following the use of any antibiotic, penicillin probably giving a higher percentage of reactions than any other. Especially is this true in patients receiving repeated courses of therapy. While penicillin reactions are usually manifested by allergic forms of dermatitis and usually not serious, other forms of hypersensitivity may be manifest: such as hemorrhagic tendency throughout the entire body with renal involvement to the point of anuria, generalized anasarca, and hypertensive state. The author had one such case which came near being fatal. This hypersensitive reaction rarely occurs when penicillin is given orally and many patients who are hypersensitive to parenteral penicillin can take penicillin orally without hypersensitive manifestations.

Toxicity:

Streptomycin is probably the greatest offender here, at least in degree. The eighth cranial nerve involvement is the most common toxic effect and may be only mild such as vertigo, nausea, vomiting, arthralgia, erythema, fever and headache or severe resulting in total deafness. Vestibular disturbance is the only indication for discontinuing the drug. These manifestations are more common where large doses are given over a long period of time. Combined streptomycin and para-amino salicylic acid allows a smaller dose of the antibiotic and hence less frequently produces the toxic disturbance. Aureomycin, terramycin, penicillin and chlorampenicol not inefrequently give rise to gastro-intestinal disturbances when given by mouth. Symptoms of nausea, vomiting, headache, dizziness, cramping, diarrhea and burning anus with irritation vary in their manifestations. Vitamin B^{12} relieves some of these in a few hours. There are many less serious deleterious manifestations seen in antibiotic therapy but none so potentially serious as those listed above.

SUMMARY

We have attempted briefly to review the current status of antibiotics which shows:

1. That the most commonly used and proven antibiotics have a relative to absolute degree of specificity for the various pathogens (either bactericidal or bacteriostatic);

2. That the combined use of antibiotics may be synergistic, additive or antagonistic;

3. That antibiotics vary in methods of administration and that all may be given orally effectively except one, namely, streptomycin.

4. That it is probably better practice to use the antibiotic with the greatest antibacterial spectrum until facilities are available for determining the sensitivity of the offending organism, rather combined usage;

5. There are imperative indications for prophylactic therapy; and

6. That deleterious effects may be light or severe and probably may be largely eliminated as more is known of each antibiotic.

CARE OF THE BURNED PATIENT*

A. RAY WILEY, M.D., F.A.C.S., F.I.C.S.
TULSA, OKLAHOMA

In the short time I will take to speak to you gentlemen, three patients will be admitted to some hospitals in the United States on account of thermal burns. It is quite likely that by sundown a patient will die from his burns. The number dying each year from burns varies, but eight to 10,000 seems to be near the correct number. Is it any wonder that the care of the burned patient has received new interest in recent years? The medical profession is forced to admit that the care of the burned patient has been badly managed in the past years. The many burns occurring in the recent World War and the present threat of another World War and the anticipated catastrophies have stimulated more research work. There is much more to be learned and much to be desired in the treatment. A vast amount of experimental work is now going on and many interesting reports have been coming from some of this work. Perhaps no phase of the care of the burned patient has missed the inquisitive eye of the research worker. Apparently more attention has been placed on the study of the physio-pathological changes that take place in these patients than any other studies. We have been so impressed in the past with the surface burns that the cause of most deaths in burns has been overlooked.

The physiological changes that take place immediately following the burn are like most shock syndromes but with certain variations in these cases. We all know now that in the burned patient there is a great shift of the patient's blood plasma to the extracellular spaces, especially in and near the burned area, lowering the amount of plasma in the circulation. Studies seem to show this is due to increased capillary permeability.[1] The result is not only a loss of the albumin fraction of the blood plasma but also the intravascular sodium. The globulin fraction is not lost.[1,2]

There will be an early hemoconcentration of the red blood cell, through the loss of the plasma. But at the same time there will begin a red blood hemolysis and the patient will soon show an anemia. The explanation of the early hemoconcentration seems to be that the plasma shift, in the early stages, outruns, temporarily at least, the hemolysis. Even when the blood count shows a high concentration and the hematocrit is high don't be misled, for a hemolysis is either present or impending. All the facts causing this hemolysis are not too well known.[3] It is doubtful that the actual heat and thermal destruction of the cells can account for all of it. We do know that the changes associated with the hemolysis and the products of it can and do cause serious damage. Any serious shock, regardless of cause, with its subsequent lowered blood pressure and altered kidney circulation can cause a lower nephron nephrosis. In the burned patient there is the added insult of free hematin to the tubules.

If a patient receives, say a 10 per cent or more, of a third degree burn or a more extensive second degree burn, the changes mentioned will occur, in varying degrees. To sustain the life of a severely burned patient, treatment must be instituted early and with as much understanding of his needs as is possible to determine. First, one must be a careful and observing clinician, not overlooking some of the simpler examinations and attentions. His temperature, blood pressure, if obtainable, his degree of anxiety, his degree of distress and not least, a report of his physical condition or state of health before the burn occurred, are all important. To determine his immediate physiological needs certain laboratory tests must be carried out at once, if possible. The tests should be approached with a knowledge of the ones practical, their limitations and their correct interpretation.

The red blood count, the plasma protein and the blood chlorides determinations are important. The hematocrit count which has received some popularity in burned cases in the past must be considered in the light of blood volume values and the shifting plasma or it will be misleading. It is of limited value to me as any index to therapy. Probably the most valuable determination would be the blood volume. Unfortunately at the present time, the blood tests are neither practical nor accurate in the average laboratory. Nor

*Presented before the General Sessions at the Annual Meeting of the Oklahoma State Medical Association, May 22, 1951.

can one say just what should be normal for the patient. However, some studies are now going on that is hoped will produce some practical and worthwhile tests. The body dynamics for regulating the blood volume are very delicate and complex. When the body receives a physical insult, such as a burn, the dynamics of blood volume equilibrium are immediately upset. When the shift of the plasma and the sodium takes place the body attempts to replace this loss at the expense of the vascular fluids and the intracellular fluids. The correction of the inbalance and protein loss, and the anemia forms the basis of our therapy.

The first treatment of choice in these cases is whole blood transfusions, early and repeatedly.[7,8] It has been shown that there is no danger in giving whole blood transfusions in the presence of hemoconcentration. Whole blood is not only the therapy of choice but the only one of lasting benefit. Intravenous solutions of saline or dextrose are quickly lost from the vascular system, about as fast as they run in. Solutions of redissolved dried plasma, gelatins and commercial proteins are very little better and stay in the circulation only slightly longer. Blood substitutes having larger molecules, as polyvinyl pyrrolidon, dextran and osseous gelatin have received investigation but have not yet been accepted for general use. Saline solutions should be given by mouth, as I will discuss later.

I want to emphasize the importance of using whole blood early and in sufficient amounts. The same principle holds true here as in any case of blood loss. If blood is replaced immediately following a blood loss it can be replaced almost volume for volume to restore to normal. If delayed a few hours it may require twice the amount it would have required earlier. The longer the delay, the more will be the amount of blood required.

There is a distinct advantage in giving the saline and sodium bicarbonate solution by mouth to these burned patients instead of by the intravenous route.[8] Ordinary drinking water should not be used.[7] A convenient way is to dilute the bottled Ringer's lactate solution with equal parts of drinking water and serve cooled to palatibility. Or one may add a level teaspoon of table salt and half teaspoon of sodium citrate or sodium bicarbonate to one quart of drinking water. This will, in most cases, adequately supply his sodium needs, relieve the nausea and thirst and may be life saving.[7] If vomiting persists I place an indwell-duodenal tube and give the solutions through the tube. I never use a gastric suction apparatus if it can be avoided. With other injuries present, particularly an abdominal injury, it may have to be used. All chlorides lost must be replaced immediately by some means. If I have to resort to intravenous solutions I use Ringer's lactate solution.

How shall we know how much whole blood and how often to give it? No set rule can be devised, as every one must be individualized. The tests mentioned above and your ability as a clinician must be your guide. Usually the patient will need the equivalent of from two per cent to five per cent body weight in blood for each 24 hours.[11] A high blood level is essential for immediate need and for final healing. It is also necessary to have a high blood level for skin graft healing.

The administration of adrenal cortex has been advocated as an agent to combat shock. Yet many clinicians have been disappointed in its lack of action in shock, whether the shock was due to trauma, burns or from other causes. A method to determine the need of adrenal cortex is to make count of the eosinophils of the blood. If there is a normal or elevated number of eosinophils present one may expect good results from the use of the adrenal cortex. If the eosinophils are very low or absent, it can be assumed that the patient's adrenals are functioning normally and further stimulation or replacement will not be of benefit and some other source of the continued shock must be sought than a depressed adrenal output.

After the initial shock period, which usually lasts from 36 to 72 hours, the requirements for body fluids will change. The loss of blood plasma will lessen or cease as the shifting slows or stops. This will stop early if the patient has been properly treated. Whole blood will be continued only if the anemia and the hypoproteinemia persists. A careful check of the blood, especially the blood chlorides at this time must be maintained.[16] The chloride losses from all sources must be estimated if possible. This is particularly difficult in small children.

The amount and character of the urine, the chlorides present, the PH and total output become very important. A lower nephron

nephrosis is frequent and in many cases is the cause of death. There has been much written and many excellent discussions recently on how to meet this distressing complication. Personally, I maintain as normal a vascular level as possible without over crowding and enough whole blood and chlorides to keep as normal nitrogen balance as possible. Isotonic sodium sulphate has been shown to have advantages over many other solutions. For anuria burns I do not use nor recommend the use of murcurails.

I feel that a great advancement has been made in the new miracle drug cortisone, in the treatment of burns. My experience with it has been small. The results have been gratifying. It lessens the pain and requirements of opiates, promotes healing and best of all it mobilizes the sodium to the vascular system. This alone is justification for its use.

As Chairman of your Committee for the Organization of Blood Banks for the Oklahoma State Medical Association in connection with the War and Civil Defense programs, I want to tell you of the planning in Oklahoma. It is the intention of the American Red Cross to collect blood throughout the state by use of mobile units. This will then be processed to dried plasma at Oklahoma City and stategic areas will be stock-piled with this plasma. Plasma is a poor substitute for fresh blood, but there is no other known way to prepare in advance. In case of massive catastrophe there will be many disappointments if this difference is not already appreciated. It appears to me personally, that it would help tremendously to meet a large scale catastrophe, not only by stockpiling plasma but also by organizing so-called walking blood banks in every community, having the donors all typed and cataloged. Then have collecting stations for collecting the blood at many centers. A great deal of organization work would have to be done. The entire medical profession should be briefed and organized. Lay groups will be called upon for much of the detail work of indexing and recording the names. In case of atomic bombing it is assumed that the urban areas will be attacked and we will have to depend largely on the rural communities to furnish the greater amount of the needed blood. Quoting from the U. S. Civil Defense manual; "a daytime attack with one atomic bomb, preceded by warning, would produce 60,000 casualties, dead or injured. Of these 40,00 would be alive at the end of the first 24 hours." It would be impossible to obtain enough blood for all the victims needing it. But it does show the necessity of developing an organization that may save many thousands of lives. This idea is partly in accord with the official of the American Red Cross with whom I have conferred. Unfortunately the organization does not now have the funds for the technical work to carry out the complete typing plan. The plasma processing is taking priority and rightfully so. Our next step will be to develop some practical over-all plan and I am hopeful that the State Civil Defense can do this. I feel that our Oklahoma State Medical Association should not only endorse such a plan but should take the lead to see that it is accomplished. Even so, much of the blood in event of bombing, will have to be rationed. The Armed Forces will come first, the less severely burned women and children next. It is not a pretty picture but one we are forced to be prepared to meet.

In conclusion, in the care of the burned patient, whether a single patient or a large group, there is no real substitute for whole fresh blood to meet his physiological needs. The reasons for the difference is outlined and a plan of therapy given. Other physiological needs are discussed.

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(The Council on Pharmacy and Chemistry of the American Medical Association has adopted the following statement of Actions and Uses and of Dosage for publication in connection with a description of Banthine Bromide for inclusion in New and Nonofficial Remedies)

METHANTHELINE BROMIDE.—*Banthine® Bromide (Searle)*

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Actions and Uses.—Methantheline bromide, a parasympatholytic agent, produces both the peripheral action of anticholinergic drugs such as atropine and the ganglionic blocking action of drugs such as tetraethylammonium chloride. Tolerated amounts of methantheline bromide exert side effects typical of atropine-like drugs, but cause less tachycardia, and also less postural hypotension than does tetraethylammonium chloride. Toxic doses produce a curare-like action at the somatic neuromuscular junction.

Clinical studies indicate that the drug effectively inhibits motility of the gastrointestinal and genitourinary tracts and, to a variable degree, diminishes the volume of perspiration and salivary, gastric and pancreatic secretions. It also decreases mucoprotein secretion. Like atropine, it produces mydriasis and cycloplegia when applied locally to the eye or administered systemically, but until more clinical evidence becomes available, its local use for this purpose is not recommended. The value of the drug for preventing abnormal cardiac reflexes through the vagus during thoracic surgery, or as an agent for routine preoperative medication in place of atropine, requires further investigation before final conclusions can be reached.

Methantheline bromide is indicated for clinical use whenever anticholinergic spasmolytic action is desired, provided it is not contraindicated because of its atropine-like characteristics or because of a patient's intolerance to the unavoidable side effects of such therapy. It is useful as an adjunct in the management of peptic ulcer, chronic hypertrophic gastritis, certain less specific forms of gastritis, pylorospasm, hyperemesis gravidarum, biliary dyskinesia, acute and chronic pancreatitis, hypermotility of the small intestine not associated with organic change, ileostomies, spastic colon (mucous colitis, irritable bowel), diverticulitis, ureteral and urinary bladder spasm, hyperhidrosis or control of normal sweating which aggravates certain dermatoses, and control of salivation.

Methantheline bromide produces some degree of cycloplegia and mydriasis in therapeutic doses and therefore should not be administered to patients with glaucoma. It sometimes decreases the ability to read fine print. Xerostomia (dryness of the mouth) is a common, sometimes transient, side effect. Urinary retention of varying degree may occur in elderly male patients with prostatic hypertrophy, and some patients may have difficulty emptying the rectum. Patients with edematous duodenal ulceration may experience nausea and vomiting during initial administration of the drug. These patients should take only liquids during the institution of drug therapy. All patients should be advised of the possible occurrence of side effects. Overdosage sufficient to produce a curare-like action may be counteracted by prompt subcutaneous injection of 2 mg. of neostigmine methylsulfate.

Dosage.—Methantheline bromide is administered orally or parenterally by either the intramuscular or intravenous route. Parenteral administration is not advised for patients able to take the drug orally. The average initial adult dose, oral or parenteral, is 50 mg. For patients with considerable intolerance, 25 mg. may be employed. In the management of peptic ulcer, a beginning schedule of 50 mg. three times daily before meals and 100 to 150 mg. on retiring is suggested. However, the usual effective dose is 100 mg. four times daily, although some patients may require more or less than this amount. The dosage may be increased to tolerance, using dryness of the mouth as a guide, and adjusted to meet the individual response of patients. Maintenance dosage in peptic ulcer is usually considered to be about one-half the therapeutic level. In the management of other hypermotile or hypersecretory states, the dosage should be adjusted to the smallest amount which will relieve the symptoms. When spastic conditions are secondary to inflammatory or other organic lesions, therapy directed toward the cause should be employed whenever possible.

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President's Page

The Public Policy Committee donated one of these little plaques to each member of the Council at a recent meeting. Only a small number of them had been sent out from the Public Relations Department of the A.M.A. They are about 8 x 11 inches, nicely done on hard board with an off white plastic surface and may stand on your desk, hang on the wall or be mounted, like mine, behind a glass panel beside the secretary's desk.

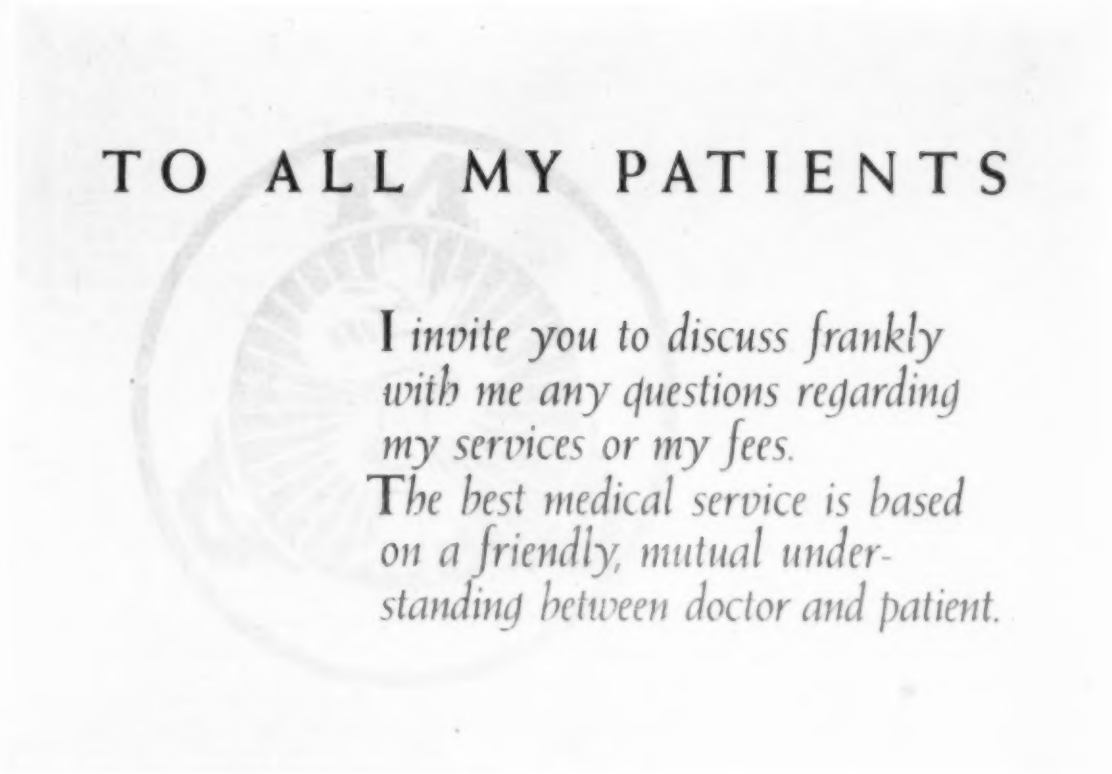
Of course the doctor must follow up the spirit of the language on the plaque but we firmly believe that this is the most practical single item designed to improve each and all of our public relations that has yet come along.

One of the plaques and order blanks for them have been sent to the Public Policy Committee Chairman of each County Medical Society. They may be purchased by means of these order blanks for one dollar each.

I shall be very much interested to know that many members obtain the plaques and what the members think of them.

L. McHenry

President


TO ALL MY PATIENTS
I invite you to discuss frankly with me any questions regarding my services or my fees.
The best medical service is based on a friendly, mutual understanding between doctor and patient.

This plaque is being sent to the Public Policy Chairman of the Public Policy Committee of *your* county society. Attend the next meeting of your county society and place your order through him.

Special Article

DAN BOY ENSOR, M.D.

BY JOHN F. BURTON, M.D.
OKLAHOMA CITY

Appreciation and priase for a "job well done" comes to few of us during our lifetime. To Doctor Dan Boy Ensor on Sunday, September 9, at Alva, Oklahoma, came an experience that he will treasure the rest of his life. He heard expressions of gratitude from many a proud mother and praises from many a sober faced father. He experienced a spontaneous warm expression of the entire community's gratitude for the way he had served his community and the people of that region for these 36 years. He basked in the sunshine of innumerable boys' and girls' enthusiasm coming up and grabbing his hand or putting their arms about his neck and telling him "what a wonderful doctor he was." And last he was proud to be sustained by true professional friends who had come to help him share his richly deserved accolade.

This event was conceived by the many mothers whom Doctor Ensor had delivered during his practice, some even of the second generation. Mrs. Vivian Garringer was the general Chairman and Brooks Bicknell was the master of ceremonies. From the manner of the conduct of the events of the day one could see that there had been a great amount of planning and organization work done. First, as we walked on the grass of the County Courthouse square he was greeted by delegated ladies, who escorted him to the registration tables. Here he signed his name on a scroll showing his presence at the birthday party of Dan Boy Ensor. Then he was directed to a forming line at the head of long tables of food. The party was then called to order by the master of ceremonies Brooks Bicknell.

Following the invocation Doctor Ensor was presented with an enormous birthday cake, on top of which was a crib containing a doll baby. Doctor Ensor cut the cake and the wonderful feast was on. Orderly laughing people passed down the long line of tables loaded down with wonderful home prepared foods. Plates were heaped high as there was an abundance of every kind of food. Now the real picnic started, groups of people sat on the grass, others gathered around tables, and some sat on the speakers' platform. Throughout this happy group of people Doctor Ensor moved about, laughing with some, sober with others and now and then overcome with emotion — there were some misty eyed people.

Following the wonderful dinner, Dick Graham was introduced and asked to make some remarks. He was followed by Doctor Paul Champlin of Enid and Doctor John F. Burton of Oklahoma City, both personal friends of the honored doctor. Doctor Lewis J. Moorman, representing the State Medical Association, made a very appropriate talk. Then followed many people expressing their heartfelt tributes to Doctor Ensor. Finally, he was presented with a wonderful set of luggage. By this time the good doctor's emotions were well "running over." He thanked the many assembled and told them that he was unable to completely express his gratitude, but hoped they would understand in part his feelings as they read the poem he had composed for the occasion.

The little poem is an expression of my feeling for you.

Dan Boy Ensor, M.D.,
September 9, 1951.

"FRIENDSHIP"

"Friendship is a chain of gold,
Shaped in God's all perfect mold;
Each link a smile, a laugh, a tear,
A shake of the hand, a word of good cheer;
As steadfast as the ages roll,
Binding closer soul to soul;
No matter how far, or heavy the load,
Sweet is the journey on Friendship's Road."

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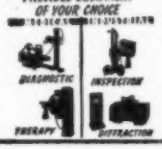

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JOE HAMILTON RESIGNS

JOE HAMILTON

Joe N. Hamilton has announced he will resign as director of the Oklahoma Commission for Crippled Children, effective November 1, to devote full time to his work as executive secretary of the Oklahoma Society for Crippled Children, Inc.

Hamilton has held both jobs for some time. He has been director of the Commission, the official state body, for 16 years, and has served the volunteer society for 26 years. Hamilton was Ponca City superintendent of schools for 10 years and gave up that job at the invitation of the late L. H. Wentz, society treasurer for 24 years.

The society, a non-profit agency, was organized in 1925 by delegates representing 125 men and women's civic clubs, fraternal groups and farm organizations. With members of the medical profession providing free services, the Society sponsored free diagnostic clinics for 10 years before the Commission was set up by law in 1935, and 10,000 children were examined. The Commission has contracts with 65 state hospitals to provide care for crippled children, with the medical staffs providing their professional services free to commission patients.

Succeeding Hamilton will be Ira E. McConnell. The new Commission director as supervisor of the Kansas merit system since 1940, worked closely with the Kansas Crippled Children's Commission. McConnell took his grade and high school work at Cherokee, and his college work at Northwestern, at Alva, and the Kansas University. He served as superintendent of schools in Kansas and Colorado cities after leaving Oklahoma.

The Commission is composed of the State Health Commissioner, the Director of the Department of Public Welfare, the Dean of the O. U. School of Medicine and the State Superintendent of Public Instruction. The Commission's Professional Advisory Committee, by law, is composed of six members, three of whom must be licensed doctors of medicine, and one a licensed dentist.

The three medical doctors are chosen from a lost of nine nominated for that purpose by the Council of the Oklahoma State Medical Association. No two members of the Committee may come from the same Supreme Court judicial district.

IRA E. MCCONNELL

AUXILIARY ANNUAL CONFERENCE

Members of the Auxiliary of the Oklahoma State Medical Association held their annual conference called Mr. Mrs. David L. Mishler, President, September 18. Sixty-five auxiliary representatives were present.

MAKE RESERVATIONS NOW FOR INTERIM SESSION

Physicians planning to attend the A.M.A. Interim Sessions in Los Angeles December 4-7, are urged to make their hotel reservations by writing to the Chairman, American Medical Association Subcommittee on Hotels, 1151 South Broadway, Los Angeles 15, Calif.

Postgraduate study primarily designed for the general practitioner will be the theme of the 1951 Clinical Session. More than 2,000 hotel rooms have been reserved for physicians planning to attend the four day session.

Among those from Oklahoma who will attend are L. C. McHenry, M.D., OSMA President, and A. M. A. Delegates John F. Burton, M.D., and James Stevenson, M.D., and Malcolm Phelps, M.D., El Reno.

DIABETES DETECTION DRIVE

Physicians of Oklahoma are requested to cooperate in the Diabetes Detection Drive, November 11-17. All doctors are urged to do free urine examinations for sugar in an attempt to help in the objective of finding the 100,000,000 undiscovered diabetics.

POSTGRADUATE COURSES

A three day POSTGRADUATE COURSE IN CARDIOLOGY will be held at the University of Oklahoma School of Medicine, November 15, 16, and 17, 1951. Dr. Paul D. White, Dr. T. Duckett Jones, and Dr. Bruce Logue will be the guest instructors, forming a teaching team unparalleled in cardiology, according to the Postgraduate Department at the Medical School.

Doctor White will discuss HYPERTENSIVE CONGESTIVE FAILURE and MYOCARDIAL INFARCTION. Dr. Jones will bring the latest concepts in MANAGEMENT OF RHEUMATIC FEVER. Dr. Bruce Logue will discuss CONGENITAL HEART DISEASE.

Registration fee will be $15.00. Register early to save your place for this course.

A POSTGRADUTE COURSE IN SURGICAL PATHOLOGY will begin at the School of Medicine, on Thursday, November 1, 1951, at 6:00 p.m. This course will review surgical pathology, and has been designed especially for those men who are preparing for specialty board examinations.

Classes will be held at the School of Medicine, each Thursday evening, weekly, for ten consecutive weeks. The course will be conducted by Dr. James P. Dewar, Associate Professor of Pathology. Tuition will be $50.00. Enrollment will be limited to 10 with a minimum of five.

OSMA COUNCIL MEETS

Council of the Oklahoma State Medical Association met September 30. Committee appointments were announced, preliminary plans for the Annual Meeting discussed and a report was made concerning 1951 and 1952 postgraduate programs.

ON KENTUCKY PROGRAM

Three Oklahoma physicians were guest speakers on the program of the Kentucky State Medical Association Centennial Ephriam McDowell Memorial meeting in Louisville, October 2, 3, 4, and 5, 1951.

Lewis J. Moorman, M.D., Oklahoma City, spoke on "Kentucky, the Progenitor of Pioneer Doctors;" Henry H. Turner, M.D., also of Oklahoma City, discussed the "Acute Surgical Abdomen;" and Hugh Jeter's, M.D., Oklahoma City, topic was "Why Anemia?"

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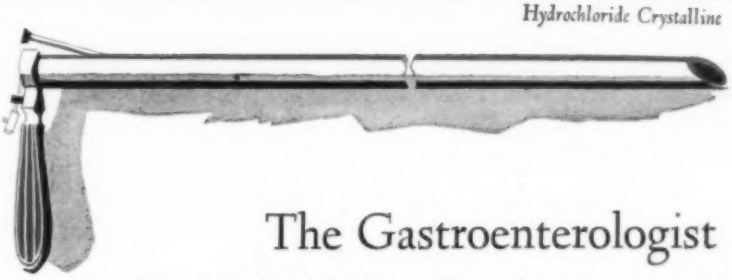

The Gastroenterologist

recognizes the remarkable inhibiting effect of aureomycin on a great number of organisms, especially those commonly found in the gastrointestinal tract. It is of great value in the preparation of patients for surgery of the bowel or biliary tract, as well as in the medical management of infections in these areas. Aureomycin is also highly effective in intestinal amebiasis. Aureomycin is peculiarly adapted to the treatment of many biliary and hepatic infections, because of the high concentrations it attains in the bile and because of its protection of the hepatic parenchyma from bacterial necrosis. Aureomycin is indispensable in gastroenterology.

Packages

Capsules: Bottles of 25 and 100, 50 mg. each capsule. Bottles of 16 and 100, 250 mg. each capsule.
Ophthalmic: Vials of 25 mg. with dropper; solution prepared by adding 5 cc. distilled water.

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AWARDED FIFTY YEAR PINS, LIFE, HONORARY CERTIFICATES

Receiving Honorary and Life Membership certificates are the following physicians pictured above (left): W. Albert Cook, M.D.; P. P. Nesbitt, M.D.; J. E. Wallace, M.D., and H. Lee Farris, M.D. In the second picture Gilbert H. Hall, M.D., is shown receiving his 50 Year Pin from A. R. Sugg, M.D., Ada, President-Elect of the O.S.M.A.

Eleven Tulsa physicians were honored recently in ceremonies at the monthly meeting of the Tulsa County Medical Society.

Alfred R. Sugg, M.D., Ada, president-elect of the O.S.M.A., made the awards.

Gilbert H. Hall, M.D., received a 50 year pin. A graduate of New York University School of Medicine, Doctor Hall completed his internship at Bellevue hospital, New York, in 1901, and entered private practice the same year.

Two honorary membership certificates were awarded. Those receiving the certificates were W. Albert Cook, M.D., and P. P. Nesbitt, M.D., both former presidents of the Oklahoma State Medical Association.

Life membership certificates were presented to J. E. Wallace, M.D., and H. Lee Farris, M.D., and in absentia to J. W. Childs, M.D., Russell C. Pigford, M.D., Sidney C. Venable, M.D., Thomas J. Lynch, M.D., Thomas W. Stallings, M.D., and P. N. Charbonnet, M.D., who now resides in New Orleans.

APPEAR BEFORE GRAND JURY

Representatives from the Oklahoma State Medical Association, the Medical Board, and the Tulsa County Medical Society recently appeared informally before the Tulsa County Grand Jury to discuss the narcotic traffic including violations of the narcotics law by doctors of medicine. Members of the Grand Jury in discussion with the Association representatives, the Medical Board and the Tulsa County Medical Society, felt that the profession and the Medical Board should take more aggressive strides in regard to disciplinary procedures.

MEDICAL BOARD TO MEET

State Medical Board has scheduled a meeting November 1 and 2 for the purpose of hearing cases brought before it, violations of the Harrison Narcotic Act and other routine problems.

SCHOOL HEALTH CONFERENCE

Approximately 900 attended the school health conference in Norman September 27 and 28, at the annual fall meeting of the Oklahoma Association of School Administrators.

Principals and superintendents from all sections of the state, along with representatives of the medical profession, were in attendance. D. A. Dukelow, M.D., of the Bureau of Health Education of the American Medical Association was among the speakers.

MEDICAL SERVICE SOCIETY

Members of the Medical Service Society of America have begun a periodic bulletin published by Charles E. Morton, Midwest City, Oklahoma. Mr. Morton is secretary-treasurer and R. C. Gooch of Tulsa is vice-president.

POSTGRADUATE CALENDAR

SURGICAL PATHOLOGY—November 1 through January 10 — each Thursday — 6 p.m. — for 10 consecutive weeks.

CARDIOLOGY—November 15, 16, and 17.

GENERAL PEDIATRICS — December 12, 13, and 14.

LABORATORY EXAMINATIONS IN CLINICAL DIAGNOSIS — January 28 through February 2.

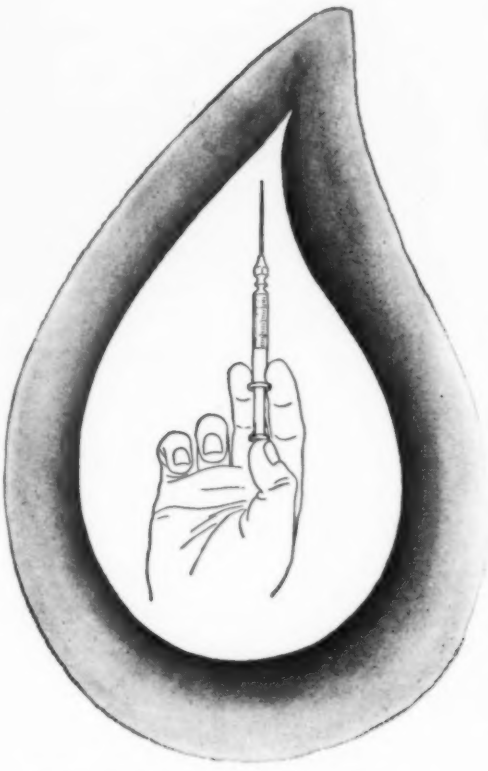
PRACTICAL PSYCHIATRY — February 25 and 26.

REVIEW OF GENERAL SURGERY AND SURGICAL TECHNIQUE — March 11 through May 13 — once weekly — for 10 consecutive weeks.

ELECTROCARDIOGRAPHY — March 3 through March 8.

X-RAY DIAGNOSIS — May 2 and 3.

Dihydrostreptomycin Sulfate



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as effective as streptomycin [2, 9, 13-15]

less toxic for the vestibular apparatus [1-15]

minimizes pain and swelling at the site of injection [6, 10]

may be used even in patients showing allergic response to streptomycin [2, 9, 10, 11]

Extensive experimental studies [6, 9, 10-15] ***proved* CRYSTALLINE DIHYDROSTREPTOMYCIN SULFATE MERCK *less toxic for the vestibular system.***

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Crystalline Dihydrostreptomycin Sulfate Merck is supplied in convenient 1 Gm. and 5 Gm. vials.

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NEWLY LICENSED PHYSICIANS

Physicians recently licensed in the State of Oklahoma are listed below and effective with this issue, this will be a monthly feature in the Journal. Towns listed following the physicians' names are the towns listed at the time of licensure and may not be correct in all cases at the present time if the Executive Office has not been advised of the change of address:

Boyer, William Francis ..... Tulsa
Anderson, Ethelyn ..... Stillwater
Galbraith, Ben. Thomas ..... McAlester
Boles, Rosemary Harvey ..... Tulsa
Kantor, Lester Joel ..... Lawton
Kerekes, Ernest Stephens ..... Tulsa
Lewis, Crylon Smith, Jr. ..... Muskogee
Terrill, Robert Jermain ..... Enid
Norman, Stafford L. ..... McAlester
Graybill, Ray Bryson ..... Ardmore
Cavanaugh, Clair Joseph ..... Oklahoma City
Hirst, Claude Marvin ..... Shawnee
Yasuda, Hiroshi ..... Hardtner, Kansas
Gaddis, John William ..... Tulsa
Hayes, John Randall ..... Shawnee
Atkins, Charles Nathanial ..... Oklahoma City
Hairston, Richard McRay ..... Oklahoma City
Holland, Charles Kennedy ..... McAlester
Schultz, Ward Michael ..... Okmulgee
Hudson, Frederick Goltry ..... Boston
Mathey, Wm. Alford ..... Lawton
McCants, Ralph Samuel ..... Kansas City
Smith, Francis Elmo ..... Oklahoma City
Wolever, LcRoy Allen ..... Midwest City
Cameron, Alan Samuel, Jr. ..... "In Armed Forces"
Boyd, Wayne Johnson ..... Oklahoma City
Howard, Robert Palmer ..... Oklahoma City
Lowbeer, Leo ..... Tulsa
Lane, Kenneth Stephen ..... Kansas
Meyer, Reita Ruth ..... Tulsa
Wheaton, William ..... Oklahoma City
Farris, Emil Peter ..... Oklahoma City
Austin, George Nicolo ..... Baltimore
Berry, Spencer Edgar ..... Tulsa
Blaschke, John Ahrens ..... Oklahoma City
Keown, John Thomas, Jr. ..... Muskogee
Rollins, John Gordon ..... Pineville
Thorne, Bert Ennis ..... Oklahoma City
Hill, Jesse King ..... Muskogee
Hoke, Lillian Marie ..... Oklahoma City
Lindeman, George Munro ..... Binger
McElwee, Mary Louise ..... San Diego
McGregor, Frank Harrison ..... Oklahoma City
Hardegree, Harvey Columbus ..... Louisville
Thompson, Marylyn Ann ..... Oklahoma City
Enos, Jack Paul ..... Yukon
Johnson, Otey G. ..... Oklahoma City
Godfrey, Kenneth Eugene ..... Okeene
Williams, Claude Harold ..... Okeene
Barber, Forest Chester ..... Ft. Worth, Texas
Bunch, Allen Henry ..... Seminole
Cravens, Clem ..... Talihina
Dakil, Samuel Edward ..... Oklahoma City

ANNOUNCEMENTS

SOUTHERN MEDICAL ASSOCIATION. November 5-8, Dallas, Texas.

AMERICAN COLLEGE OF CHEST PHYSICIANS. Interim Session, Ambassador Hotel, Los Angeles, Calif., December 2 and 3, 1951.

AMERICAN BOARD OF OBSTETRICS AND GYNECLOGY. Announces change of address. All communications should be addressed to: Robert L. Faulkner, M.D., Secretary-Treasurer, American Board of Ob. and Gyn., 2105 Adelbert Road, Cleveland, Ohio.

BOARD OF MEDICAL EXAMINERS. Examinations will be held April 14, 1952, and June 4 and 5, 1952. Both will be held at the University of Oklahoma School of Medicine, Oklahoma City.

AMERICAN MEDICAL ASSOCIATION. Interim Session, Los Angeles, December 4-7. Public relations conference will be held December 2 and 3.

UNIVERSITY OF COLORADO. Fall Postgraduate courses will include heart disease, Nov. 16-17; poliomyelitis, December 13-15; neuro-anatomy seminars each Thursday evening; pathological-physiological seminars, each Tuesday evening. Further inquiries may be made to the Office of Director of Graduate and Postgraduate Medical Education, 4200 East Ninth Avenue, Denver 7, Colo.

Glenn, James Clarence ..... Amarillo, Texas
Harrison, Gene Howard ..... Seminole
Judd, Loyd Wesley, Jr. ..... Pawnee
King, Robert Wallace ..... Cleveland
Lindsay, Joseph Henry ..... Dewey
Manning, Wesley Thacker ..... Pawhuska
Patskowsky, Lawrence Willis ..... Alva
Ray, Clarence Cody ..... Pawhuska
Renfrow, William Branch ..... Oklahoma City
Rentfrow, James William Vici
Rigual, Jose Rafael ..... Poteau
Williams, Jon Thomas ..... (Address Unknown)
Wright, Wm. Thomas ..... Jay
Hargrove, Robt. Donald ..... Pawnee
Gwartney, Warren George ..... Pryor
Lembke, Robert Leon ..... Pryor
Thomas, Denton Barney ..... Chelsea
Wilbanks, Charles Estes ..... Tulsa
Askins, John Robert, Jr. ..... Dumas, Texas
Bryan, Richard Stephen ..... (Military Service)
Owen, Herbert Leo ..... Seminole
Bowers, Robert Carl ..... Belgian Congo
Buffington, Gordon Warren ..... Tahlequah
Cunningham, John Henry ..... Duncan
Feigley, Charles Anderson ..... Oklahoma City
Gastineau, Robert Milton ..... Oklahoma City
Gathers, George Burley, Jr. ..... Oklahoma City
Gentry, Elmer Lee ..... Tulsa
Henley, Thomas Hunter ..... (Military Service)

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A complete line of laboratory controlled ethical pharmaceuticals. Chemists to the Medical Profession since 1903.
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All carried *Endamoeba histolytica*

...but only 1 out of 6 patients had no symptoms! Five of the 34 patients in this study[1] were classified as asymptomatic; 18 had such poorly defined symptoms that they would not normally seek medical aid...yet a stool examination proved that all had amebic dysentery.

In a new study,[2] Milibis — bismuth glycolylarsanilate — proved a most powerful amebacidal drug yet side effects were virtually unobserved. The success of Milibis is further demonstrated by parasitologic follow-up during which consistently negative stools were obtained.

Since the possibility of extra-intestinal involvement in intestinal amebiasis is always present, it is recommended that Milibis therapy be combined with Aralen (chloroquine) diphosphate. This established antimalarial has been found to exert a remarkably effective specific action on extra-intestinal amebiasis.

HOW SUPPLIED:
Milibis, tablets of 0.5 Gm., bottles of 25;
Aralen, tablets of 0.25 Gm., bottles of 100.

MILIBIS® *amebacide...high in potency...low in side effects*

ARALEN® *diphosphate...for extra-intestinal amebiasis*

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1. Towse, E. C., Berberian, D. A., and Dennis, E. W.: *New York State Jour. Med.*, 50:2035, Sept., 1950.
2. Berberian, D. A., Dennis, E. W., and Pipkin, C. A.: *Am. Jour. Trop. Med.*, 30:613, Sept., 1950.

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A BIG TIME-SAVER FOR EVERY DOCTOR

This handy booklet for new mothers was "built to doctors' orders". It contains blank forms for filling in your instructions and formulas.

It provides a permanent case-history record. A memo will bring you a sample...or as many as you want for your daily practice... without obligation.

Many doctors are prescribing "Daricraft Homogenized Evaporated Milk". It is always uniform, safe, sterilized, easy to digest, and high in food value and minerals. Daricraft contains 400 U. S. P. units of Vitamin D per pint.

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BOOK REVIEWS

THE HEALING TOUCH. Harley Williams. Springfield, Ill., The Charles C. Thomas Company, Publications. 1951.

Here is a delightful informative series of sketches in easy-going format which are of interest to physicians, nurses, public health workers, and to all who are concerned with the phenomenal evolution of medicine and its multifaceted socio-economic, religious and political reverberations during the past century and a half. The author, who writes with unusual appeal, presents his material under the following divisions: "Three Royal Physicians," "Two Prophets," "Florence Nightingale," "Charles Edouard Brown-Sequard," "A New World of Medicine."

In Book One, the colorful orphan of Devon, the friend and medical attendant of Prince George, William Knighton becomes Sir William, and as the King's (George III) physician, the master of the house, the soul of discretion in the midst of flagrant royal indiscretions ". . . endlessly indulgent in his master's whims, yet fundamentally incorruptable."

In the story of Three Royal Physicians, Sir William Knighton is followed by Sir James Clark with a similar professional relationship to the Princess at Kensington Palace and as Senior Physician-in-ordinary at Buckingham Palace when upon the death of King William, the Princess became Queen Victoria. Only to imagine Sir James' intimate knowledge of the Victorian period including the unfortunate illness and death of the Prince Consort, the consultation of his brilliant and dominant successor, Sir William Jenner, the third of the royal physicians, and his remarkable career with no leisure except that while traveling between calls, he reads the works of Charles Dickens fresh from the press, is sufficient to warrant an avid reading of this section of Doctor Williams' book. It is difficult not to steal space for a fuller discussion of Book One. The matter of professional qualifications, human foibles, the jealousies and intrigues of the time are most interesting and of genuine historic value.

The succeeding books deserve similar consideration but space forbids. Suffice it to say that in Book Two we find the unfolding of the rudiments of modern public health through the influence of the mental prodigy, Jeremy Bentham and the activities of Sir Edwin Chadwick and Thomas Southwood Smith under the stimulus of the law (Chadwick), the ministry and medicine (Smith).

In Book Three, the author elaborates upon the story of Florence Nightingale and depicts the evolution of nursing.

In Book Four is found the fascinating story of the racially composite, poetic Charles Edouard Brown-Sequard, erudite, roving exponent of scientific investigation. No one can resist this story once a page is turned. And finally, in Book Five, the reader finds an illuminating discussion, "A New World of Medicine." For the benefit of American readers there are many connecting links, some of which are of great significance.

The reviewer, having an intimate acquaintance with the author, can only add—purchase the book and you will read it with profit.—Lewis J. Moorman, M.D.

THE PRACTICE OF REFRACTION. Sir Stewart-Duke-Elder, M.D., F.R.C.S., London. 1949. Fifth edition. The C. V. Mosby Company, St. Louis, Mo. 317 pages, price $6.25.

Duke-Elder's eminence in ophthalmology and the clarity of his writings are well known.

The fifth edition of The Practice of Refraction has been thoroughly revised. Added matter pertains to the nature and incidence of refractive errors and recent views of their biological determination has induced him to regard myopia from a different point of view. New knowledge of transient changes in refraction has been added, and aniseikonia is treated more fully. The description of the mechanism of accommodation has been brought up to date and a chapter has been added on anomalies of convergence; while experience has allowed a more critical view to be taken of the value of the orthoptic treatment of muscular imbalance. Descriptions of streak retinoscopy and velonoskiascopy have been added and the section on refractometry amplified. The chapter on spectacles was made more complete, and contact lenses discusssed more amply. Muscular imbalance has been discussed insofar as its determination and correction concerns the refractionist.

The essential principles of the theory and practice of refraction are presented in a simple and essentially non-mathematical form. The book is clinical and essentially practical.

Chapter I states: "From the symptoms offered by the patient, eye-strain may not easily be suspected, for many of them are referred and seem to bear little or no relation to an ocular origin. Further, in a great many cases the vision, as judged by the patient's own standard, may be unimpaired, or indeed, it may be considered above the normal. But it is to be remembered that as a general rule the most distress is caused by errors so slight that they readily escape detection unless they are looked for specially. When a gross anomaly exists and vision is blurred and indistinct, the visual apparatus reconciles itself to its disability without any attempt to improve the condition; the matter thus begins and ends with an impairment of vision; the diagnosis is apparent and the treatment obvious. But when the error is small the patient is able to rectify it to a greater or less extent by muscular effort; this he continually attempts to do to the best of his ability, and the constant strain thus involuntarily imposed upon him brings on muscular and nervous fatigue with its attendant train of reflex symptoms. It is not the error itself which causes the trouble so much as the continuous effort called forth automatically in the attempt to correct it. The physician may suspect that a symptom-complex may be attributable to the eyes, and on his suggestion the patient will protest that his vision is excellent; but careful examination will show that an unsuspected small error of refraction, or a slight degree of muscular imbalance is present, and its correction will frequently result in an equally unexpected and dramatic relief."—James R. Reed. M.D.

THE KEY TO PEACE. Clarence Manion. Chicago, The Heritage Foundation, Inc. 1951.

When one comes face to face with a lock, nothing is so satisfying as the key to that lock. People in high places drunk with power, have put a lock on freedom and closed the door to peace. Careful adherence to the principles laid down in Clarence Manion's little book, "The Key to Peace," can restore freedom and open the door to peace.

In the conflict with communism it is difficult, not because we haven't ten thousand times as much to offer, but because we have not championed them collectively as one people with crystalized enthusiasm. While still

Head Pain as a Diagnostic Lead

Frequently the presence of head pain is overlooked. The physician learns of it only if he has made an effort to elicit the information. Since the etiology of the pain is the basis of rational management, the patient should be warned against taking medication before diagnosis is made.

Friedman[1] deplores the tendency to call any chronic recurring headache migraine. Careful history-taking and full physical and neurological examinations are essential for accurate diagnosis. A good starting point is a description of the headache — its character, laterality, frequency and intensity.[2]

The following chart gives briefly the primary diagnostic leads and treatment for the most common types of headache.

Etiology of Headache	Primary Diagnostic Data	Primary Therapy
Inflammatory e.g., Meningitis Abscess	Inflammation of intracranial structures; fever; leucocytosis; bacteriologic diag.	Specific: sulfonamides and antibiotics. Symptomatic: analgesics.
Tumor	Pain varies as spinal press. changes; skull X-ray.	Specific: surgery. Symptomatic, analgesics &/or hypnotics.
Sinusitis	Sinus congestion and infection; cloudy X-ray.	Specific: antibiotics and drainage. Symptomatic: analgesics.
Hypertensive	Hypertension present but pain not related to b. p. level; Dihydroergotamine. relieves pain.	General hypertension therapy; sedation. Symptomatic: analgesics.
Migraine & other vascular headaches	Headache: recurrent, intense, throbbing. No organic causation; migraine in family; patient: energetic, perfectionist. Visual prodromata; g-i. upset during headache.	To abort attack: oral ergotamine plus caffeine. General: adjustment to minimize nervous stress.

Data here tabulated is from: Wolf, G., Jr.,[3] and Friedman, A. P.[4]

Cecil[5] ranks vascular headaches, e.g., migraine and tension headaches, as the most commonly encountered of all. Because of their functional nature and usual recurrence at frequent intervals, they present a long-term therapeutic problem.

Therapy is conducted along two lines:

1) Psychotherapy to reduce the frequency of attacks. This consists mainly of advice on emotional adjustment to stressful situations and guidance toward a good balance between work and relaxation.

2) Treatment of the distressing attack to prevent the usual period of incapacitation. Many investigators have reported that ergotamine preparations are effective for relief of the acute migraine attack in 80% of cases.[1,6] *The drug is given immediately when an attack is approaching and dosage adjusted to the needs of the individual.*

1. Friedman, A. P. and von Storch, T.: 99th A.M.A. Session, June 1950. 2. Butler, S. and Hall, F.: M. Clin. N. Amer., p. 1439 (Sept.) 1949. 3. Wolf, G., Jr.: M. J. 34:25, 1951. 4. Friedman, A. P. and Conn, H. T.: Current Therapy, 1950, p. 565; Saunders Co., Phila. 5. Cecil, R. L.: A Textbook of Medicine, ed. 7, 1948, p. 1483; Saunders Co., Phila. 6. Horton, B. et al: Staff Meet. of Mayo Clinic 20:241, 1949

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free to exercise a certain degree of initiative, the American people should put aside minor differences and amalgamate their major interests before they are overwhelmed by the coercion of communism.

If all Americans could read this epigramatic compendium on the forces necessary to achieve and preserve peace they would grasp the key and pursue the common, constructive cause with a religious fervor not to be surpassed by the frenzied iconoclastic drive of the communists.

In the closing chapter the author says, "Today the fate of civilization depends upon the sustained strengthened solvency of all that is implied in the expression 'The United States of America.' If our power should suddenly disintegrate the whole human race soon would be enveloped in a fog of terror so demoralizing and so devastating that those who momentarily survived it would envy those who did not."

". . . Those in charge of our national defense must be made to realize that if the fascinating American story is made plain to our actual and potential enemies military opposition will liquidate itself in the wild scramble to follow the American example."

". . . In order to have an exportable surplus of this priceless product, we must intensify and multiply its production in America. Like Charity, which it so much resembles, Americanism begins at home. You and I must know and understand these vital principles before we can explain and export them to others."

This important book is receiving notice in these columns because it should be read by every doctor who loves his country and believes in medicine as a free enterprise. As the author so aptly says, "The battle is spiritual, and it is waged against despotism." The members of the medical profession should become militant for peace.—Lewis J. Moorman, M.D.

HANDBOOK OF PEDIATRIC MEDICINE EMERGENCIES. Adolph G. DeSanctis, M.D., and Charles Varga, M.D., St. Louis, C. V. Mosby. 51 illustrations. 284 pages. Price $5.00.

This handbook was developed, over a period of years, from concise therapeutic manuals originally written to serve as guides or standard procedure manuals in Emergency Pediatric Therapeutics at the New York University Post Graduate School.

Considerable private demand for a complete revision of these handbooks arose and this edition was printed.

It has been wide'y accepted and conveniently used by pediatrician, general practitioner, resident and intern alike.

This book serves well as an excellent concise and up to date reference in emergency pediatric therapeutics.

Other than to occasionally review principle signs and symptoms of some of the less common entities this book does not enter into discussion of different diagnosis, but confines its purpose to giving a very convenient outline to therapeutics in pediatric emergencies. —James W. White, M.D.

SURGICAL FORUM Proceedings of the Forum Sessions Thirty-Sixth Clinical Congress of the American College of Surgeons. Boston, Massachusetts, October, 1950. Surgical Forum Committee: Owen H. Wangensteen, M.D., Warren H. Cole, M.D., Robert E. Gross, M.D., Michael L. Mason, M.D., Carl A. Moyer, M.D., and I. S. Ravdin, M.D. W. B. Saunders Co., 1951.

Since 1941 the American College of Surgeons has sponsored a Forum on Fundamental Surgical Problems which has been a part of the annual Clinical Congresses of the College since that time. The purpose of the Forum has been to give the young men in surgery an opportunity to present papers recounting the results of their research on surgical problems. In this book these papers have been brought together so that surgeons may have the opportunity to observe the direction in which surgery is moving. The book is composed of the original work of 393 contributors, contained in 165 articles which are divided into the following categories: Surgery of the Lungs and Esophagus; Surgery of the Peritoneum, Small, Large Bowel and Pancreas; Liver, Bile Ducts, Portacaval Anastomosis and Kidney; Cardiac Surgery; Blood Vascular System and Blood Flow; Neurosurgery; Wounds and Wound Healing, Tissue Transplantation, Antiseptics and Antibiotics; Water, Electrolytes, Protein, Pre-operative and Post-operative Care, Fat Metabolism, Nutrition and Skin Preparation; Blood Transfusion, Coagulation, Shock and Hemorrhage; Malignancies and Endocrines; Anesthesia.

H. G. Wells characterized this book when he wrote as follows: "when the intellectual history of this time comes to be written, nothing, I think, will stand out more strikingly than the empty gulf in quality between the superb and richly fruitful scientific investigations that are going on and the general thought of other educated sections of the community. I do not mean that scientific men are, as a whole, a class of supermen, dealing and thinking about everything in a way altogether better than the common run of humanity, but in their field they think and work with an intensity and integrity, a breadth, a boldness, patience, thoroughness, fruitfulness, which puts their work out of all comparison with any other human activity".

Only a small amount of the work reported in this volume has any immediate applicability to clinical surgery yet it should be studied by every man who calls himself surgeon. Every physician engaged in actual experimental surgery will find it to be a convenient indicator of what the great surgical research centers of America are currently studying.

The typography and make-up are excellent; the diagrams and illustrations are unusually good throughout the book. — John G. Matt, M.D.

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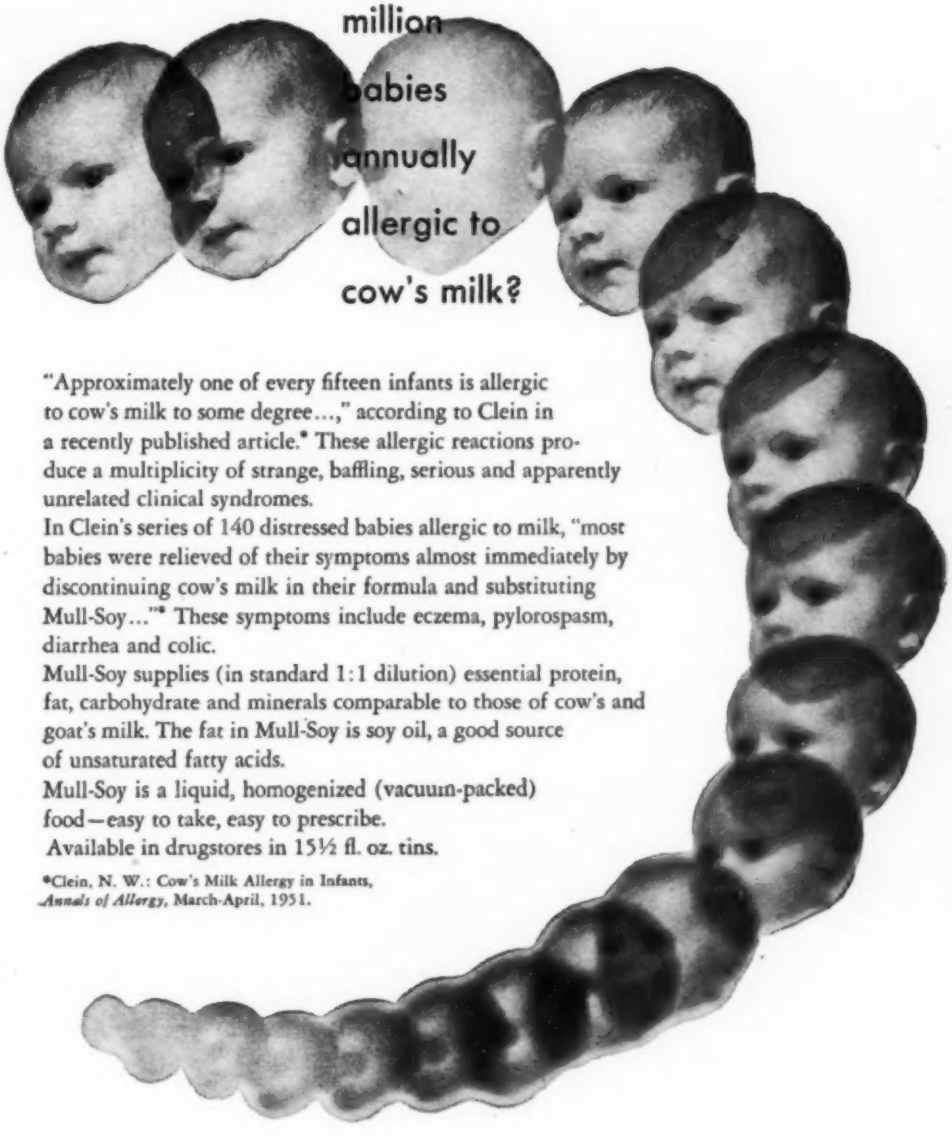
almost a quarter million babies annually allergic to cow's milk?



"Approximately one of every fifteen infants is allergic to cow's milk to some degree...," according to Clein in a recently published article.* These allergic reactions produce a multiplicity of strange, baffling, serious and apparently unrelated clinical syndromes.

In Clein's series of 140 distressed babies allergic to milk, "most babies were relieved of their symptoms almost immediately by discontinuing cow's milk in their formula and substituting Mull-Soy..."* These symptoms include eczema, pylorospasm, diarrhea and colic.

Mull-Soy supplies (in standard 1:1 dilution) essential protein, fat, carbohydrate and minerals comparable to those of cow's and goat's milk. The fat in Mull-Soy is soy oil, a good source of unsaturated fatty acids.

Mull-Soy is a liquid, homogenized (vacuum-packed) food—easy to take, easy to prescribe.

Available in drugstores in 15½ fl. oz. tins.

*Clein, N. W.: Cow's Milk Allergy in Infants, *Annals of Allergy*, March-April, 1951.

Mull-Soy first in hypoallergenic diets for infants, children and adults

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HAVE YOU HEARD?

McLain Rogers, M.D., Clinton, recently visited relatives in South Carolina.

Cleve Beller, M.D., Oklahoma City, was guest speaker at a meeting of the Guthrie Lions club.

L. C. Kurkendall, M.D., McAlester, and Mrs. Kurkendall recently toured the New England states.

Paul Champlin, M.D., and his daughter and son have returned from an extensive trip in the western part of the U. S.

M. A. Neumann, M.D., Okarche, and *A. J. Weedn, M.D.*, Duncan, were among those attending the International College of Surgeons in Chicago.

Charles Roberts, M.D., has moved from Taloga to Lake Preston, South Dakota.

Otis E. Snow, M.D., is the new medical director and assistant suuperintendent of the Oklahoma State School at Enid. He has been practicing in Yukon.

Forest R. Brown, M.D., has succeeded *Mack I. Shanholtz, M.D.*, as director of the Seminole county health department. Doctor Shanholtz is now commissioner of health in Virginia.

George W. Conover, M.D., Anadorka, recently spoke to the Rotary club of that city about his trip to Washington state.

J. M. Allgood, M.D., Altus, attended the Washington State Medical Association meeting in Seattle in September.

Hal White, M.D., Oklahoma City, recently addressed the District One State Nurses Association in Oklahoma City. He discussed neuro-surgical advances.

Thomas J. Huff, Jr., M.D., has opened his offices at 1220 N. Walker, Oklahoma City.

H. K. Speed, M.D., Sayre, was principal speaker recently at a Kiwanis Club meeting there.

R. H. Lynch, M.D., Hollis, is the new vice-commander of the Harmon county American Legion.

Claude L. Reeves, M.D., Oklahoma City, has recently purchased the Aldridge hotel in Wewoka.

Roscoe Walker, M.D., Pawhuska, and his wife, have recently returned from several weeks' in Denver and Estes Park, Colo., and Saratoga, Wyo.

Theodore Nelson, M.D., formerly of McAlester, is now practicing in San Diego, Calif.

H. C. Weber, M.D., Bartlesville, entered his prize Herefords at the Tulsa Fair.

Wilson Mahone, M.D., Hobart, spoke on socialized medicine at the Hobart Rotary club.

O. E. Temple, M.D., Alva, visited in Kansas City and several western states on a three weeks trip in early fall.

Fred D. Switzer, M.D., formerly of Hugo, was recently featured in the McCurtain Gazette because of efforts to wipe out trachoma in southeastern Oklahoma. He now practices in DeQueen, Ark.

L. S. Willour, M.D., McAlester, was host recently to members of the McAlester baseball club and their wives at a barbecue supper.

Herman Flanigin, M.D., Tulsa, spoke to the Claremore Rotary Club recently on epilepsy.

Francis P. Newlin, M.D., Shawnee, explained some new medical discoveries and uses of new drugs and antibiotics at the Shawnee Business and Professional Women's club.

C. E. Williams, M.D., Woodward, was recently awarded the Scout Woodbadge Explorer badge, one of Scouting's highest honors.

Coyne Campbell, M.D., and *Harold G. Sleeper, M.D.*, Oklahoma City, have moved their clinic from 2920 Classen to East 23rd and Spencer Road.

R. J. Brightwell, Lt. Col., M.D., has completed his residency in Colorado and sailed the middle of October to join the U. S. Air Force in Europe. He will be temporarily stationed in Weisbaden, Germany.

Henry H. Turner, M.D., Oklahoma City, spoke at two medical meetings in October. October 15-19 he addressed the Chicago Medical Society Postgraduate Program on Endocrine and Metabolic Disease. The meeting was held in Thorne Hall, Northwestern University and Doctor Turner's topics were "Thyroid Diseases in Childhood," "Male Hypogonadism, Types and Treatment," and "Gynecomastia." At the Interstate Postgraduate Medical Association of North America and the International Medical Assembly held at the Municipal Auditorium in St. Louis, October 22-25, he spoke on "Male Hypogonadism and Infertility."

OBITUARIES

THOMAS C. CARLOSS, M.D.

1875-1951

Thomas C. Carloss, M.D., well known Morris physician, died August 31 in an Okmulgee hospital.

Doctor Carloss came to Oklahoma in 1897, settling at Hoffman and practicing medicine there until 1905 when he moved to Morris.

He is a graduate of Southwestern Medical college, Dallas. A veteran of the Sapnish-American War, he was a member of the Masons, Odd Fellows, Woodmen of the World and served as a deacon in the Morris First Baptist church. He recently received an O.S.M.A. Fifty Year Pin.

GEORGE. W. COLVERT. M.D.

1880-1951

George W. Colvert, M.D., pioneer Miami physician, died at the Veterans Hospital in Muskogee, September 1.

Doctor Colvert was born in Vandalia, Mo., June 24, 1880, and practiced medicine in Miami until ill health forced his retirement several years ago. He served in the Army Medical Corps in World War I and was a member of the American Legion and Elks lodge.

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Hamblen, E. C.: North Carolina M. J. 7:533 (Oct.) 1946.

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*Perloff, W. H.: Am. J. Obst. & Gynec. 50:684 (Oct.) 1949.

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MEET OUR CONTRIBUTORS

J. C. Brogden, M.D., and Leo Lowbeer, M.D., Tulsa, are joint authors of "Hyperparathyroidism — Osteitis Fibrosa—Cystica—Parathyroid Adenoma with Report of a Case." Doctor Brogden was graduated from the University of Maryland in 1914. He has practiced in Tulsa 29 years after spending 14 months in military service in World War I. Doctor Lowbeer, who was born in Vienna, Austria, was graduated from the University of Vienna in 1927 and has spent the past 12 years in Tulsa. He is a member of the Society for Experimental Biology and Medicine, Oklahoma Association of Pathologists and is pathologist and director of laboratories at Hillcrest Hospital, Tulsa.

John L. McKelvey, M.D., Minneapolis, is the author of "Studies of Treatment of Adenocarcinoma of the Endometrium." Doctor McKelvey is professor and chairman of the department of obstetrics and gynecology, University of Minnesota School of Medicine. He is a diplomate, American Board of Obstetrics and Gynecology and a fellow, American Gynecological Society. He is a former member of the faculty of Johns Hopkins and formerly professor of obstetrics, Rockefeller Medical School, Peiping, China.

A. Ray Wiley, M.D., F.A.C.S, F.I.C.S., Tulsa, wrote "Care of the Burned Patient" in this issue. Doctor Wiley was graduated from the University of Oklahoma in 1913 and has been a practicing Tulsa physician for many years. He is active in both Tulsa County and State Medical Association activities.

R. Q. Goodwin, M.D., F.A.C.P., Oklahoma City, wrote the article "The Newer Antibiotics," appearing in this issue. A graduate of the University of Colorado in 1928, he has practiced in Oklahoma City for 21 years. His specialty is diagnosis and internal medicine.

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References:

1 Krantz, Kibler and Bell: "The Neutralization of Gastric Acidity with Basic Aluminum Aminoacetate," J. Pharmacol. and Exper. Therap., 82:247 (1944).
2 Paul, W. D., and Rhomberg, C.: "Medical Management of Uncomplicated Peptic Ulcer," J. Iowa M. Soc. 35:167-85 (1945).
3 Holbert, J. M., Noble, Nancy, and Grote, I. W.: J.A.Ph.A., Scientific Edition, 36:149 (1947).
4 Holbert, J. M., Noble, Nancy, and Grote, I.W.: J.A.Ph.A., Scientific Edition, 37:292-294 (1948).

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The number of papers which can be used is necessarily limited. Those submitted will be considered by the Committee on the basis of scientific quality, interest and adaptability to the program as a whole.

Sumaries should be addressed: Charles M. O'Leary, M.D., Chairman, Scineific Work Committee, 1227 Classen, Oklahoma City, Oklahoma.

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